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ABSTRACT

This report describes the third party evaluation of the State Fair Community College Experience-Based Career Education (EBCE) program's third (and final) year. Forty-one tenth and eleventh grade students participated in the program and were matched for evaluation with similar nonparticipating control groups. Evaluation instruments included Career Development Inventory, Stannell academic progress and achievement tests, and local measures. The evaluation concluded that program objectives, aimed at promoting community knowledge of and help with experience-based learning, increasing students' career exploration opportunities, integrating academic and vocational education, and encouraging development of student attitudes and skills relative to a changing society, generally were met. Evaluation of student outcome objectives showed mixed results. Although all EBCE students met the objective of maintaining an acceptable level of performance in academic skills, they varied in attaining the objectives related to acquiring positive work habits, positive attitudes, and career decision-making skills: commitment to career development activities: increase of career skills: and knowledge of career options. The evaluator recommended follow-up study of both EBCE and control students five and ten years after participation, better measures of student work habits, and replication of the results in a similar geographical area that had several years of career education infusion. (Student questionnaires pre- and post-EBCE are included.) (KC)

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FINAL REPORT

State Fair Community College

Experienced Based

Career Education

1979-1980

Third Party Evaluation

Report

June 30, 1980

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College of Education

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STATE FAIR COMMUNITY COLLEGE
EXPERIENCE BASED CAREER EDUCATION
1978-79
EVALUATION

I

OVERVIEW OF CAREER EDUCATION EFFORT[1]

Origin of the Career Education Project, State Fair Community College

In 1976 State Fair Community College in Sedalia, Missouri, recognized the need to implement a program involving experience based career education into the school districts that comprise the community college district. After several meetings with interested districts, State Fair Community College submitted a proposal to develop and implement an experience based career education program for grades 9 and 10, as part of the comprehensive K-14 career education program in this three-county non-urban area in Missouri, to the U. S. Office of Education. The plan was amended in 1978 to permit one school district to enroll Grade 11 students. In 1979, State Fair Community College, in cooperation with Otterville Public Schools in Cooper County; Sedalia School District #200, La Monte R-IV, Smithton R-VI, Green Ridge R-VIII, and Sacred Heart in Pettis County; and, Sweet Springs which is located in Saline, received, as part of a larger career education effort, a third year grant of $176,118 to continue the proposal under Part D of the Vocational Act, as amended. The original grant was for 12 months with renewal for an additional two years dependent upon satisfactory accomplishments each year.

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[1] Format follows that suggested in Handbook for the Evaluation of Career Education Programs (Draft), Bureau of Occupational and Adult Education, U.S. Office of Education, DHEW, 1974.

The goals and objectives of the total Career Education Program, as stated in the proposal, are as follows:

GOALS AND OBJECTIVES

Components:

I. To continue a broad program of career awareness (K-8) by providing career education materials to teachers through a career education resources center located on the college campus previously developed in a Part D. program.

*II. To implement an in-school experience based cluster program in grades 9-11 utilizing materials developed as part of the Experience Based Career Education program at the Appalachia Educational Laboratory.

III. To expand skill career education training opportunities available to youth in grades 11-12 through the design and implementation of cluster curriculum in the AVTS.

IV. To expand skill training opportunities for post-secondary, adult, and special needs students through cluster curriculum individualization and mediation of training programs.

V. To pilot test individualized cluster curriculum programs and provide distribution to all schools throughout Missouri that are working in such program areas.

VI. To provide placement services for all students at any level from education to education, education to work, or work to education.

This project would promote all aspects of career education and provide experience based programs at the junior-senior high level in the three-county area and would serve as a model for other rural areas in Missouri.

During the elementary years the focus was on career awareness as students become aware of the world of work and self-concepts. In the early grades awareness of the community and its interrelationship were the focus of many activities.

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*Note: All activities of the EBCE project relate to Component II only.

Exploratory activities began as the students move to the junior high years. These have been conducted both in class through activities and special programs. Special instructions were given to local ninth grade teachers through workshops and individual sessions to assist them in using career education activity guides developed by local teachers as part of the original Part D, Exemplary Project, coded to the USOE fifteen cluster structure. Use of field trips and guest speakers was encouraged.

During the tenth grade year a new program of exploration began for students with the implementation of an Experience Based Career Education (EBCE) program. This was offered as an alternative program along with the regular school curriculum. The EBCE program is the focus of this report, with students from seven high schools using materials specifically geared to their own needs. The EBCE students were compared with "control" students, who remained in the traditional curriculum. The treatment[2] in the EBCE program included Senior High Career Exploration through experience sites generating individual study plans for academic credit. The EBCE (AEL) concept/inquiry model of learning has a student select key concepts for study, investigate those concepts at work in the community, and draw conclusions about the concepts. Attention has been also directed at enhancing sex equity.

The SFAVTS cluster skill training programs for occupational preparation, youth employment, and exploratory cluster work experience programs in professional occupations were available for eleventh and twelfth grade students along with the regular curriculum.

---

[2] Basic Procedures Manual, Student Career Guide, and Student Program Guide, Appalachia Educational Laboratory, Charleston, West Virginia, 1976.

Many options were open to students upon completion of high school. State Fair provided Adult and Post-Secondary cluster skill-training, Post-Secondary Community College career preparation, four year college/ university preparation and placement assistance, job placement services, adult community service programs, and other special programs.

In following this model (see page 5) a continual line of career guidance was offered in each program to facilitate students in determining their career goals and preparing for entry into the world of work.

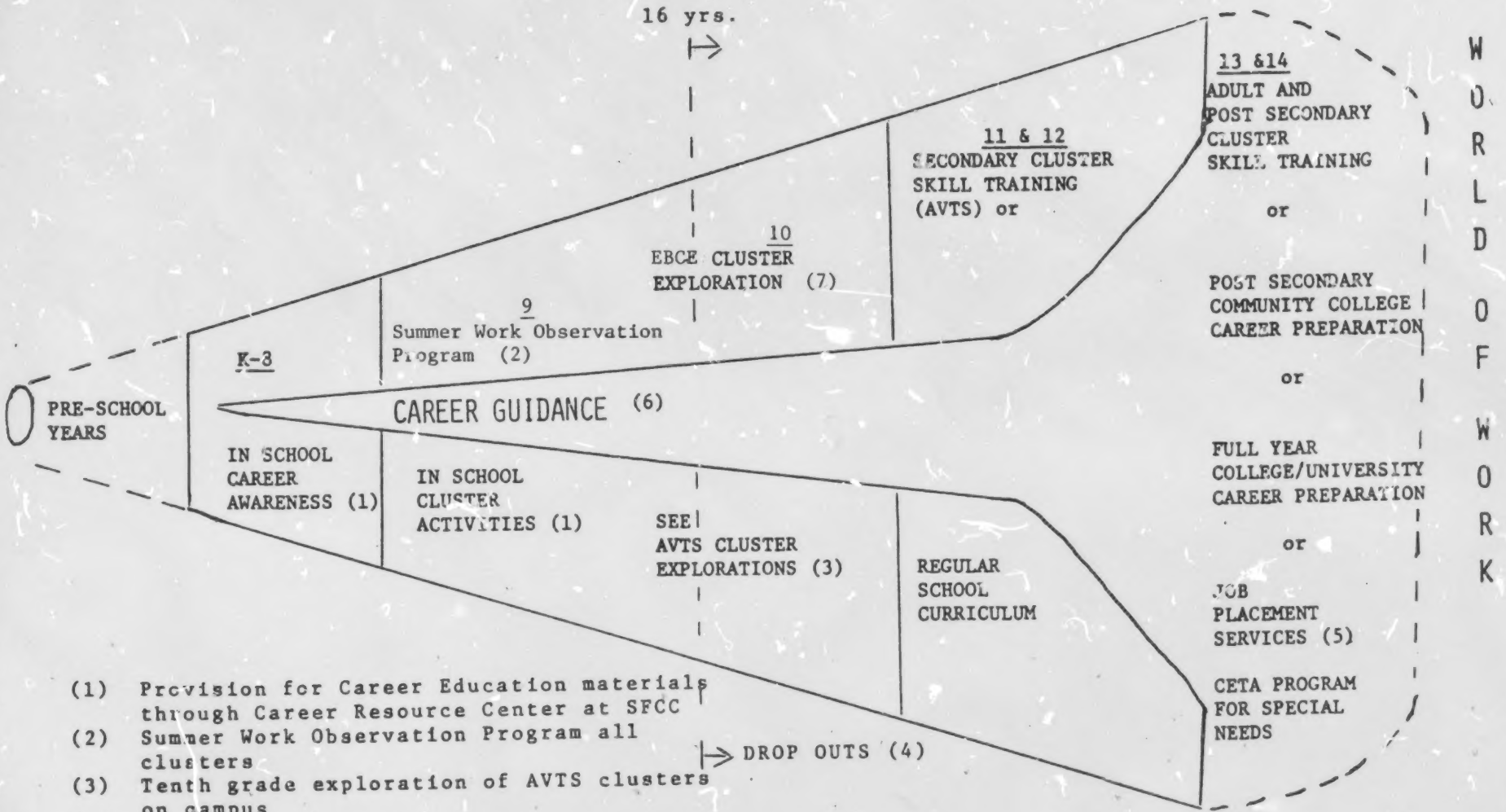
Coordination of regular vocational offerings is inherent in the State Fair Community College Student Career Development model as presented on page 5. Articulation from one step to the next was provided. Any students completing this model will have acquired an entry-level job skill.

Through programs currently being offered at SFAVTS and the implementation of the EBCE program, systematic linkages with all areas of business/industry, professions and government were thus in[illegible]ed. The EBCE program was based upon a joint working relationship of parents, school, and community for the benefit of students.

For the EBCE program, the fulltime professional staff included an Operations Director, four Learning Coordinators (LC), one Placement Specialist/Career Resource Coordinator, and one LC - Counselor.

Learning Coordinators helped each student develop Activity Sheets outlining the academic work to be completed in conjunction with placement on experience sites by each student for the semester. Experience sites and learning guides were developed and coordinated by the Placement Specialist/Career Resource Coordinator. Grade 10 or 11 students

COMPREHENSIVE CLUSTER CONCEPT MODEL FOR STUDENT CAREER DEVELOPMENT



(1) Provision for Career Education materials through Career Resource Center at SFCC
(2) Summer Work Observation Program all clusters
(3) Tenth grade exploration of AVTS clusters on campus
(4) DROP OUTS
(a) Student exit interview (b) Placement assistance
(5) Placement assistance to any student seeking employment
(6) Provided by local schools and special programs/materials at Career Resource Center at State Fair Community College
(7) Implementation of EBCE option for exploratory activities

enrolled fulltime for one semester the first two years. They enrolled halftime for one or two semesters the third year.

The focus of this evaluation was limited to the Grade 10 and Grade 11 EBCE portion of Component II -- "To implement an in-school experience based program in grades 9-11 utilizing materials developed as part of the Experience Based Career Education program at the Appalachia Educational Laboratory."

Expenditures for the project year included $12,348.70 from local schools for transportation:

A.	Personnel	$106,731.77
B.	Travel/Training	6,500.00
C.	Equipment	500.00
D.	Supplies/Materials	6,630.00
E.	Services	9,970.00
F.	Communications/Reproductions	5,000.00
G.	Operation	29,202.40
H.	Indirect Cost	23,932.00

The objectives of this program are listed in the next section, followed by Recommendations for Program Modifications, Outcome Question/Treatment Group Matrix, Discussion of Methodology, Detailed Results and appendices.

II

EVALUATION QUESTIONS ADDRESSED AND SUMMARY OF ANSWERS

The implementation objectives of the program were of two kinds: program/process objectives and student outcome objectives. Program/process objectives describe operating conditions which should prevail at the end of the grant period. Student outcome objectives describe student learning which should result from student participation in a fully operational EBCE program. The Program Objectives, Managerial/Budget analyses, and Student Outcome results are listed below.

The evaluation plan was designed to determine, 1) the extent to which the objectives of the program have been accomplished and 2) the factors that have either enabled or precluded accomplishment of the objectives. The latter purpose is discussed in Section III: Recommendations for Program Modifications.

Program Objectives

1. The program will expand the involvement of employer and community organizations and individuals in the educational process by exposing students to a diverse range of careers represented and available for student exploration and increasing the students' academic scope and context of learning experiences available to them through community based experiential learning.

   Indicators

   a. The resource pool is a diverse number of community experience sites and personnel across career clusters.

   b. The resource pool represents careers at all levels, including technical and professional levels.

   c. The resource pool offers experientially based learning opportunities in major academic areas (English, Math, Social Studies, and Science), as well as career development opportunities.

The findings (See Section VI) indicate that acceptable progress was made throughout the project resulting in attainment of these indicators.

2. The program will increase the availability and attractiveness of career exploration and career development opportunities for all students.

   Indicator

   a. The EBCE program has been especially designed to be an alternative for the full range of high school students from low to high ability students, over and under achievers, college prep to potential dropouts. The program appeals to the entire cross section of student abilities and interests, and also is representative of the social/sexual/economic distribution of Central Missouri's student population.

   The findings indicate the EBCE program attracted a sample representative on all but sex (2/3 were girls where 1/2 the population is female) in Grade 10.

3. The program will promote the integration of academic, vocational, and general education.

   Indicators

   a. Students will earn course credits in academic subjects through completion of community/experience based projects for which they acquire academic as well as career knowledge and skills.

   b. Students will increase their understanding of how academic knowledge and skills are applied in the career areas they are exploring.

   The findings indicate the students performed at the same academic rate as control students and earned comparable credits. All completed several site explorations using the AEL concept/inquiry model of learning.

4. The program will increase the relevance of the individual student's education to employment and functioning in society.

   Indicators

   a. Students' learning programs will be designed to help prepare them to make increasingly sound career decisions.

   b. Students' programs will be designed to display the relevance of their current educational activities to their future plans, or clarification of their future plans.

The findings indicate nearly all EBCE students perceived the program as positive help for career plans.

5. The program will encourage development of attitudes, skills, and knowledge enabling students to cope with accelerating societal change.

   Indicators

   a. Using the AEL-EBCE Inquiry Model of critical thinking, student projects will focus on developing skills of problem-solving; acquiring, using, and communicating information; working effectively with others; and acquiring and using subject matter knowledge and skills in solving practical problems.

   b. Students will explore a range of work situations within and across career clusters.

   The findings indicate these indicators fully describe the activities of the students as they completed a series of Activity Sheets.

6. The program will seek to promote a positive attitudinal climate in the school and the community toward experience-based learning as a legitimate educational activity.

   Indicators

   a. An increase in the number of participating employer/ community attitudes towards the program.

   b. Increased student enrollment will indicate positive students' attitude toward the program.

   c. Increased faculty (teachers and counselors) referral of students to the EBCE program will be indicative of faculty support of the program.

   Findings indicate student, parent, and resource people strongly support EBCE while the sampled teacher responses were not positive.

Budget Analyses*

The analyses in Section VI indicate that expenditures were reasonable and projected estimates modified somewhat. The human and financial resources were expended in line with carrying out the Management Plan of Program/Outcomes.

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* Prepared by evaluation consultant Dr. William Sparkman, Kansas State University.

Student Outcome Objectives

The following student outcome objectives have been identified as occurring for students who participate in programs of experientially based learning as identified in a paper entitled, "A Focus on the Transition from Education to Work."[3]

1. Students who participate will acquire basic academic skills which are at least equal to their counterparts in a traditional program and which are required for adaptability in our rapidly changing society.

2. Students who participate will demonstrate that they have developed work habits which are superior to those developed by young people in a traditional program (evidenced by the ability to establish goals, make commitments, and persevere to the accomplishment of their goals; by rate of attendance; by punctuality; and other measures deemed appropriate).

3. Students who participate will show more positive attitudes toward work and will, in stating personal values, indicate a desire to work.

4. Students who participate will demonstrate a higher level of career decision-making skills, and job hunting skills than will people in a traditional program.

5. Students who participate will demonstrate a higher level of self-awareness and career awareness than will young people in a traditional program.

6. Students who participate will have greater awareness of their opportunities for continuing and recurrent education after they leave the formal system of schooling than will young people in traditional programs.

7. Students who participate in the program will have a higher level of satisfaction with their choices of education and work than will young people in a traditional program.

8. Students who participate in the program will be more likely to select career areas for exploration, for their career goals, or for career preparation which are different than those normally expected for their sex-role than will young people in a traditional program.

9. Students who have been a part of this program will have a wider range of and more employment opportunities in a larger geographic area.

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[3]Cook, J., "A Focus on the Transition from Education to Work." The Federally Administered Vocational Education Programs and Projects: Fiscal Year 1976, USOE, DHEW.

10. Students who participate in a program will have greater capabilities for selecting careers commensurate with their interests, abilities, and career expectations.

11. Students who participate will acquire an awareness of vocational skills which are common to many occupations in a cluster of their choice and will gain an awareness of how these skills will contribute to their lateral and upward mobility.

12. Students who complete the cluster program experiences will have an entry-level job skill which will permit them a choice of a job, further education, or both.

13. Students who make a tentative career decision of a single job that they desire will, through enrollment in an in-school vocational program, a cooperative vocational education program, or an individually-prescribed training program, begin to develop skills that will permit them to enter that career at a level higher than that basic entry level job for which they were prepared in the cluster experience.

These outcomes are shown by number next to the behavioral objectives cited below, e.g., "academic skills (Objective #1)" means the behavioral statement is an operational definition of the first objective above. In addition to measuring the level of success achieved in reaching the above outcomes, the project measured such affective areas as:

1. Whether students experience reduced feeling of alienation from their communities, and

2. Whether students view their learning environment as more friendly and conducive to their own self development and career development.

Behavioral Objectives

1. Academic Skills (Objective #1)

EBCE students will maintain an acceptable level of performance in academic skills.

Indicators: Academic tests

Grade 10 and 11 students met this objective.

2. Student Work Habits (Objective #2)

EBCE students' work habits will be positively rated on sites.

Indicators: Resource Persons' comments

Comments indicated that the more committed the student was to career education experiences, the better the work habits that were observed on site. No determination could be made of the full objective: it appeared partially met.

3. Attitudes (Objective #3, 5)

EBCE will increase positive attitudes toward work, planfulness, learning environment, self, and community.

Indicators: Career tests and attitude scales

EBCE girls' attitudes toward planfulness increased in Grade 10 so that the objective was partially met for them but not for other groups. In Grade 11, the objective was not met.

4. Career Objectives (Objectives #4, 8)

EBCE students will increase career decision-making skills and nontraditional exploration.

Indicators: Career Tests

EBCE Grade 10 students met this objective with significantly higher means on most tests. For Grade 11, the objective was not met.

5. Career Development (Objectives #7, 13)

EBCE students will increase knowledge of and commitment to career development activities.

Indicators: Career Tests

EBCE Grade 10 girls and Grade 11 EBCE students met this objective but Grade 10 EBCE boys did not.

6. Breadth of Career Options (Objectives #9, 10, 11, 12)

EBCE students' career skills will increase, which will permit more employment opportunities.

Indicators: Career tests, survey comments, Activity Sheets completed

Objectives covered by this summary objective would, in total, indicate that EBCE girls achieved most objectives, EBCE boys (as part of the total group) achieved some objectives, and two objectives were met for Grade 11 students (a small group).

Student Demographic Data

The data in Section VI indicate the students represented the age, ability, occupational choice preferences, and socio-economic status adequately in comparison with the total population but a disproportionate number of girls participated.

Conclusions

1. The program objectives were generally adequately met.
2. Outcome objectives achieved through the EBCE program were:

a. Girls seemed to benefit to a greater degree in attitude change toward planfulness and use of resources and Grade 11, to use of resources.

b. World of Work and Preferred Occoupational Group Knowledge significantly increased for Grade 10 EBCE students over controls.

c. Grade 10 and Grade 11 EBCE students maintained academic skills.

III

RECOMMENDATIONS FOR PROGRAM MODIFICATION

Since this was the final year of the project, some suggestions for further research into EBCE as a needed alternative program are offered below, rather than suggestions for program modifications.

1. A followup of both control and EBCE students five and ten years following grade 10 participation using interviews or openended responses would help answer questions on "expanded choices", "planfulness", "satisfaction with education and training", and "better self-work awareness."

2. Better measures - and more practical - of student work habits should be sought than absences and RP ratings. Too much "noise" spoils the fidelity of the former and too much courtesy, the latter.

3. Replication of the results in a similar three county rural area that had several years of career education infusion is desirable.

IV

OUTCOME TREATMENT/GROUP MATRIX

The matrix in this section[4] shows in outline form the relationship of the evaluation questions and results to the student outcomes described in Sections II and VI.

OUTCOME QUESTION/TREATMENT GROUP MATRIX

QUESTION	GROUP Grade 10	GROUP Smith-Cotton EBCE
1. Do students maintain an acceptable level of academic performance? *IIA, B		X
2. Do students' work habits (attendance and punctuality) increase and ratings by Resource Persons yield positive results? *VIE		P
3. Do students increase positive attitudes toward work, planfulness, learning environment, self, and community? *IC, D; IIIB		N
4. Do students increase career decision-making skills and exploration of nontraditional careers? *IID, IVC, VF		N
5. Do students increase in knowledge of and commitment to career development activities? *VC; VIIA		P
6. Do students' career skills increase (which will permit more employment opportunities)? *IIC: V: VIF		N

*Indicates number of Outcome Question, Table IV-H, Handbook for the Evaluation of Career Education Programs (Draft), Bureau of Occupational and Adult Education, U.S. Office of Education, Department of Health, Education, and Welfare, Washington, D.C., August 15, 1974. See pps 33-34

X=achieved; P=partly achieved; N=not achieved

[4]Based upon suggestions from the Handbook, op. cit., p. 1.

V

DISCUSSION OF METHODOLOGY

In this section, the planned and estimated methodology, along with subsequent modifications of the evaluation design, is described.

The purpose of the evaluation design is to show the relationship of the treatment (Participation in Experience Based Career Education) to the measures of student outcome objectives.

Participants

As shown on the Planned Evaluation Design Worksheet, the plans were for EBCE students from Grade 10 in six participating high schools to be compared with control students who had chosen EBCE in spring, 1978, but did not enroll. Grade 11 students were compared with a non-equivalent randomly selected control group. The students were anticipated to be representative of the distribution of sex, socioeconomic status, and ability. Grade 10 students also were compared with all other grade 10 students in the six schools were were tested in fall, 1978.

The EBCE grade 10 students had a median age of 16, were representative of socioeconomic status (based upon educational level and occupation of mothers and fathers), but were disproportionately female.

The small number of grade 11 students make occurrence of differences large enough to be significant between EBCE and control difficult to obtain. However, nothing was known to bias the randomly selected controls from the larger population. Grade 11 student enrollment changed at semester and the scores of EBCE-completed and control students were compared.

Forty-one Grade 10 EBCE students were compared with 38 non-participating students, ten Grade 11 EBCE with 13 control.

Instruments

Both locally developed instruments and standardized measures were used to collect information as shown on the September-May Data Collection Schedule Worksheet in the next part. The means of significant measures are provided in Appendix A.

The standardized measures are copyrighted and are not included but are here described, followed by a brief description of the locally developed instruments that are then displayed in this section.

Standardized Measures. These are listed alphabetically:

1. Career Development Inventory (Super, D.E., & Forrest, D. J., New York Teachers College, Columbia University, 1972)

   I. Extent of planning (maximum score 150)
   Asks questions about how much thinking and planning have been given to career plans, educational plans, and job choices.
   Reliability for local norms = .90 (Grade 10).

   II. Use of resources (maximum score 450)
   Asks questions about whom or what could provide needed career information and which ones have already been utilized by the student.
   Reliability from local norms = .81 (Grade 10).

   III. Career decision-making (maximum score 30)
   Provides sketches of various decisions and asks the student to choose what should be done.
   Reliability from local norms = .80 (Grade 10).

   IV. Career development information (maximum score 30)
   Asks questions about various decisions that are possible at a choice point.
   Reliability from local norms = .86 (Grade 10).

   V. World of Work Information (maximum score 30)
   Asks questions about occupational families, job descriptions, training needs of selected workers, tools, employment trends, legislation, and salaries.
   Reliability of local norms = .71 (Grade 10).

VI. Knowledge of preferred occupation (maximum score 41)
The student chooses one of 20 occupational groups and answers questions about that group.
Reliability of local norms = .73 (median for 20 response options for Grade 10)

2. Tests of Academic Progress (Scannell, D., Boston: Houghton Mifflin, (1971).

Form S

Provide an appraisal of student progress toward widely accepted academic goals of secondary-school education.

Composition (standard scores)
Tests skills necessary for clear, concise writing.

Reading (standard scores)
Tests identification, comprehension, application, and evaluation.

Mathematics (standard scores)
Tests application of concepts and operational skills in a variety of situations.

Additional information on reliability and descriptions is available in the Manual for Administrators, Supervisors and Counselors.

3. Tests of Achievement and Proficiency (Form T) (Scannel, D.P. Boston: Houghton-Mifflin, 1978).

Tests basic skills and knowledge that are marks of the well educated high school graduate.

Reading Comprehension
Includes literary selections, work-type reading.

Mathematics
Focuses on practical uses of mathematics and, at upper level, some understanding of principles

Written Expression
Measures skills needed for expressing ideas in writing.

Local Instruments

The local instruments, presented in order on the next few pages are:

1. Student Information Questionnaire

(SIQ) adapted from AEL Evaluation Handbook by Dr. Joe Shively, Charleston, W.VA, 1977.
- (Pretest given to both EBCE and Control)
- Provides demographic data, plans, and ratings of project.
- SIQ-Post (for EBCE)
  SIQ-Post (for Control)
  (these were different in past tense verbs used)

2. Semantic Differential (Osgood, C., Suci, G., & Tannenbaum, P., The Measurement of Meaning, Urbana, Ill: Univ of Il., Press, 1967)

Concepts

My Community
School
Myself spending life in my hometown community

- the meaning of these concepts is ascertained from bipolar adjectives flanking a 7-place rating scale
- bipolar pairs were chosen from factors associated with evaluative meanings

3. Mail Survey

The mail survey was based upon project program objectives that anticipated development of support from parent, community resource people, and educators.

Data Collection Plans and Modifications

The EBCE students were scheduled for pretesting in September, as shown on the Schedule presented (p. 32). All post testing proceeded on schedule, the first week of May, 1980, except grade 11 students were also tested in January at program close. The grade point average and attendance records were omitted because students took academic subjects such as English at the home school at EBCE, with no systematic pattern.

Design

The original design is shown on the Planned Evaluation Design Worksheet. The treatment and outcome variables are juxtaposed with the USOE handbook outcome questions, testing session, etc. (see p. 33).

The Final Analysis Plan

Since all the hypothesized objectives in the student outcomes were

NAME _____ DATE _____

SCHOOL _____ CITY _____ STATE _____

EBCE STUDENT: YES NO

STUDENT INFORMATION QUESTIONNAIRE

1. Are you:

   Male

   Female

2. Are you:

   White

   Black

   Oriental

   Spanish Descent (Chicano, Puerto Rican, etc.)

   Native American

   Other (specify) _____

3. What is your current grade level?

   10th grade

   11th grade

   12th grade

4. What is your birth date?

   _____ _____ _____

   MONTH DAY YEAR

5. What is your father's highest level of formal education completed?

None

Elementary School

Some High School

High School Graduate

Some post-secondary (for example, some college, junior college, business school, trade or technical school)

College graduate (four-year degree)

Some graduate work

Advanced degree (specify) _____

6. What is your mother's highest level of formal education completed?

None

Elementary School

Some High School

High School Graduate

Some post-secondary (for example, some college, junior college, business school, trade or technical school)

College graduate (four-year degree)

Some graduate work

Advanced degree (specify) _____

7. How many of your brothers and sisters dropped out of school?

None

One

Two

Three

Four

Five or More

8. What are your long-range goals? Check only one.

1. CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent

2. CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter

3. FARMER, FARM MANAGER

4. HOMEMAKER OR HOUSEWIFE

5. LABORER such as construction worker, car washer, sanitary worker, farm laborer

6. MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official

7. MILITARY such as career officer, enlisted man or woman in the armed forces

8. OPERATIVE such as meat cutter; assembler; machine operator; welder; taxicab, bus or truck driver; gas station attendant

9. PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress

10. PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner

11. PROTECTIVE SERVICE such as detective, policeman or guard, sheriff, fireman

12. SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker

13. SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter.

14. TECHNICAL such as draftsman, medical or dental technician, computer programmer

15. OTHER (specify) _____

16. DON'T KNOW

9. What do you expect to be doing one year after completing high school?

Working full-time

Entering an apprenticeship or on-the-job training program

Going into regular military services or to a service academy

Being a full-time homemaker

Attending a vocational, technical, trade or business school

Taking academic courses at junior or community college

Taking technical or vocational subjects at a junior or community college

Attending a four-year college or university

Working part-time

Other (travel, take a break, no plans9)

10. What is your major field of study?

General Curriculum

Vocational Education Curriculum

College Preparatory Curriculum

Other (specify) _____

11. Under FATHER, circle the one number that best describes the work done by your father (or male guardian). Under MOTHER, circle the one number that best describes the work done by your mother (or female guardian). The exact job may not be listed, but circle the one that comes closest. If either of your parents is out of work, disabled, retired, or deceased, mark the kind of work that he or she used to do.

(Circle one number in each column.)

	FATHER	MOTHER
CLERICAL such as banker teller, bookkeeper, secretary, typist, mail carrier, ticket agent	01	01
CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter	02	02
FARMER, FARM MANAGER	03	03
HOMEMAKER OR HOUSEWIFE	04	04
LABORER such as construction worker, car washer, sanitary worker, farm laborer	05	05
MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official	06	06
MILITARY such as career officer, enlisted man or woman in armed forces	07	07
OPERATIVE such as meat cutter, assembler, machine operator, welder, taxicab, bus, or truck driver, gas station attendant	08	08
PROFESSIONAL such as accountant, artist, clergyman, dentist, physician, registered nurse, engineer, lawyer, librarian, teacher, writer, scientist, social worker, actor, actress	09	09
PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner	10	10
PROTECTIVE SERVICE such as detective, policeman or guard, sher iff, fireman	11	11
SALES such as salesman, sales clerk, advertising or insurance agent, real estate broker	12	12
SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter	13	13.
TECHNICAL such as draftsman, medical or dental technician, computer programmer	14	14

STUDENT INFORMATION QUESTIONNAIRE

NAME _____
Last First Middle Initial

1. What do you expect to be doing one year after completing high school? (Place an "X" next to your major plan, although you may do more than one.)

____ Working full time
____ Entering an apprenticeship or on-the-job program
____ Going into regular military service or a service academy
____ Being a full time homemaker
____ Attending a vocational, technical, trade, or business school
____ Taking academic courses at a community college
____ Taking technical/vocational courses at a community college
____ Attending a four year college or university
____ Working part time
____ Other (travel, take a break, no plans: write here_____)

2. How useful for your own plans do you believe that experiencing a career in its own setting has been? (Place an "X" above the number that indicates the idea's usefulness for you.)

USEFUL ___ ___ ___ ___ ___ ___ ___ NOT USEFUL
7 6 5 4 3 2 1

3. Would you recommend an experienced-based career education program to friends?

YES ___ ___ ___ ___ ___ ___ ___ NO
7 6 5 4 3 2 1

4. What is the "next step" you will take in your career training?

STUDENT INFORMATION QUESTIONNAIRE

NAME _____
Last First Middle Initial

1. What do you expect to be doing one year after completing high school? (Place an "X" next to your major plan, although you may do more than one.)

_____ Working full time
_____ Entering an apprenticeship or on-the-job program
_____ Going into regular military service or a service academy
_____ Being a full time homemaker
_____ Attending a vocational, technical, trade, or business school
_____ Taking academic courses at a community college
_____ Taking technical/vocational courses at a community college
_____ Attending a four year college or university
_____ Working part time
_____ Other (travel, take a break, no plans: write here_____)

2. How useful for your own plans do you believe that experiencing a career in its own setting would be? (Place an "X" above the number that indicates the idea's usefulness for you.)

USEFUL _____ _____ _____ _____ _____ _____ _____ NOT USEFUL
7 6 5 4 3 2 1

3. Would you recommend an experienced-based career education program to friends?

YES _____ _____ _____ _____ _____ _____ _____ NO
7 6 5 4 3 2 1

4. What is the "next step" you will take in your career training?

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Instructions

In taking this test, please make your judgments on the basis of what these things mean to you. On each page of this booklet you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

Here is how you are to use these scales: If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

	extremely	quite	low	neutral	low	quite	extremely	
fair	X :	:	:	:	:	:	:	unfair

or

fair	:	:	:	:	:	:	X :	unfair

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

strong	:	X :	:	:	:	:	:	weak

or

strong	:	:	:	:	:	X :	:	weak

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:

safe	:	:	:	X :	:	:	:	dangerous

Do not worry or puzzle over individual items. On the other hand, please do not be careless because we want your true impressions.

DATE _____

SEMANTIC DIFFERENTIAL

NAME _____ SCHOOL _____

Place an X on a line between dots below, indicating the degree of your reaction to the phrase at the top of the column.

MY COMMUNITY

pleasant	:	:	:	:	:	:	:	unpleasant
bad	:	:	:	:	:	:	:	good
beautiful	:	:	:	:	:	:	:	ugly
dirty	:	:	:	:	:	:	:	clean
positive	:	:	:	:	:	:	:	negative
sad	:	:	:	:	:	:	:	happy
valuable	:	:	:	:	:	:	:	worthless
fair	:	:	:	:	:	:	:	unfair

Place an X on a line between dots below, indicating the degree of your reaction to the phrase at the top of the column.

SCHOOL

pleasant	: : : : : : : :	unpleasant
bad	: : : : : : : :	good
beautiful	: : : : : : : :	ugly
dirty	: : : : : : : :	clean
positive	: : : : : : : :	negative
sad	: : : : : : : :	happy
valuable	: : : : : : : :	worthless
fair	: : : : : : : :	unfair

Mail Survey

To: Parents, Resource Persons, Faculty

From: Judy Rae Kuhlman, Director, Experience Based Career Education,
State Fair Community College, 1900 Clarendon, Sedalia, Missouri 65301

In order to evaluate the Experience Based Career Education Program, we would appreciate your responding to this survey by May 19th. Your return of this questionnaire constitutes your agreement to voluntary participation in this survey. You may decline to answer items. Results will be available in 90 days at State Fair Community College, and will only be reported as group data.

Check one:

I am

Parent of EBCE student _____
Resource Person _____
Teacher _____

My school district is _____

I am
Male _____
Female _____

In your opinion:

1. Would you recommend EBCE to students?

No [1 2 3 4 5 6 7] Yes

2. Does experience based career education offer a needed alternative program to the traditional high school curriculum ?

Yes [7 6 5 4 3 2 1] No

3. Would you recommend EBCE to colleagues?

Yes [7 6 5 4 3 2 1] No

4. Was the EBCE project adequately staffed and planned?

Yes [7 6 5 4 3 2 1] No

5. How would you describe EBCE? _____

_____

_____

6. What one thing would you change about EBCE? _____

7. Does EBCE help students make informed career decisions?

Yes [7 6 5 4 3 2 1] No

8. Does EBCE make clear the relevance of education to a future career moreso than the usual high school program does?

No [1 2 3 4 5 6 7] Yes

THANK YOU!

Schedule of Data Collection

1979-80

Item	Timing: Program Entry	Timing: Intermittent	Timing: Program Close
1. Resources classified by WTG & USOE clusters **			x
2. Demographic data	x		
3. Projects completed, credits earned**		x	
4. Students Standardized tests	x		x
5. Project activity rating sheets and derivations**		x	
6. Teacher, parent, resource survey			x
7. Budget resources			x
8. Grade point average*			x
9. AEL Checklists, etc.**	x		x
10. Career Development Inv.	x		x
11. Semantic Differential	x		x

*Data that are collected prior to the project: GPA and attendance, attitude, academic and career tests, and demographic data for controls (i.e., 1978-9).

**The AEL/EBCE forms are described and presented in the Basic Procedures Manual, Appalachia Educational Laboratory, Charleston, W. Va., January, 1976.

Planned Evaluation Design Worksheet

1	2	3	4	5	6	7
Student Outcome Area	Related Evaluation Questions*	Design	Specify Data Sources(s)	Instrumentation	Sampling	Data Analysis
I. Increased self awareness III. Increased Awareness of Work Values	Outcome: 3. Do EBCE students show increased positive attitude toward self, school, community, work?	Pre-post	EBCE and control	SIQ, Semantic Differential CDI I	11th: EBCE & noneq control; 10th: EBCE & nonselecting controls (1978-9)	anova, analysis sex x group + co-vary or "t"
	Treatment: 5. Does program encourage development of attitudes, skills and knowledge enabling students to cope with change?	post	LC	Project ratings and activity sheets	N/A	frequencies
II. Maintained Basic Academic/ Vocational Skills	1. Do EBCE students maintain an acceptable level of performance compared with nonEBCE?	pre-post	Same as I	TAP, credits, GPA	Same as I, + norms	Same as I, no co-varying
	1. The program will expand...learning experiences available to students in community settings?	tabulate # at end in WTG	list of sites	site list	N/A	frequency count
III. Students have increased Basic Vocational Skills	Outcome: 4. Do students in EBCE increase career decision-making skills?	pre-post	same as I	CDI III, V, VI, POG	Same as I.	same as I, + co-vari.

Planned Evaluation Design Worksheet

1	2	3	4	5	6	7
Student Outcome Area	Related Evaluation Questions*	Design	Specify Data Sources(s)	Instrumentation	Sampling	Data Analysis
IV. Increased awareness of and Knowledge About World of Work	Treatment: 4. Does the program increase relevance of education to employment and functioning in society?	pre-post	same as I.	SIQ	same as I.	anova, co-anov
V. Increased Decision-making Skills VI. Improved Work Habits VII. Increased Work-seeking and Work-getting Skills	Outcome: 2. Do students' work habits increase positively? 5. Do students increase in knowledge/ development activities? 6. Do students' career skills increase?	same same same	EBCE students same as I. same as I.	2. attendance G and O eval, comments from resource persons 5. CDI, II., IV, SIQ 6. CDI, AS, SIQ plans	EBCE students same as I. same as I.	freq. comment anova, co-vary " + freq.
	Treatment: 2. Does the program increase attractiveness of career exploration and career development opportunities for all students? 3. Does the program foster integration of academic, vocational, and general education	pre post	DOL and Census stats, EBCE demo. vs. control and population EBCE	SIQ, lists of sites, Census, DOL stats End of Yr Eval	same as I. + population same as I.	freq., chi square freq.

*Numbers indicate number of program or outcome objective in narrative.

in one direction (EBCE students would increase), the .05 level, one-tailed tests of significance were used. Findings less than the critical number or that were negative were therefore nonsignificant.[5]

The Academic Skills Objectives (as Delineated in Section VI) indicated a "maintenance of skills," requiring a two-tailed test, since either gaining significantly more or less than control students was of interest.

Analysis of covariance was used for Grade 10, using pre-test scores as covariates. Strength of preference post test was analyzed by t-test for Grade 10. In Grade 11, homogeneity of variance was not found in all tests. Therefore, a Mann-Whitney U test was used.

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[5]Roscoe, J. T., Fundamental Statistics for the Behavioral Sciences, 2nd Ed., New York: Holt, Rinehart and Winston, 1975.

VI
DETAILED RESULTS

This chapter provides details of program, outcome and budget analysis. The program implementation data include the number and types of experience sites developed and a comparison of the demographic and test data of the participants with those of the control students.

PROGRAM OBJECTIVE I

The first EBCE program objective stated:

"The program will expand the involvement of employer and community organizations and individuals in the educational process by increasing the diversity of careers represented and available for student exploration and by increasing the academic scope and content of learning experiences available to students in community settings."

Several criteria were set prior in the EBCE contract that, if met, were deemed to provide the basic experiential component for EBCE. These criteria had various data sources such as labor market descriptions of the area, methods for classifying data, and the project's own list of developed sites. The three lists of developed sites were those at project beginning in January, 1978; at the beginning of the second year enrollment, January, 1979; and at end of year of the last year, May, 1980.

Criteria A. There are at least five resources developed in each of the Dictionary of Occupational Titles (3rd ed) 114 worker trait groups (WTG) and at least 15 resources in each of the 15 USOE clusters.

Instrumentation and Resources. "List of Experience Sites as of 1/17/78," Business File (list of experience sites 1/30/79), Business File (5/2/80), Dictionary of Occupational Titles (3rd ed), USOE Clusters, U.S. Department of Labor Area Trends (employment patterns).

Results. The criterion of providing five resources in each of the 114 WTG was not reached, although the number of sites increased from 71 in 1978 to 170 in 1979 and 232 in 1980 (see Table 1). The numbers translate, respectively, into 37 (32%) WTG, 53 (46%) WTG, and 56 (49%) of the possible WTG being available for placement. The number of resources available ranged as follows:

- in 1978, from one to six resources, with 21 (57%) of the 37 WTG having one site, and a median of one site for all represented WTG.

- in 1979, from one to 14 resources, with 25 (47%) of the 53 WTG represented by one site, and a median of two sites for the represented WTG.

- in 1980, from one to 19 experience sites, with 20 (36%) of the 56 WTG represented by one site and a median of two sites for the WTG represented.

These sites that were developed were found in one or several divisions within 33 establishments in 1978, 85 in 1979, and 118 in 1980 (20 were not analyzed).

The data in Table 2 indicate that 10 of the USOE clusters were represented by developed sites in 1978, 11 in 1979, and 11 in 1980. Thus, two-thirds or more of the USOE clusters were related to sites available for placement. The median of sites in each year within the used USOE clusters were 4.5, 12, and 14, respectively.

Conclusion. While there were a substantial number of sites developed (from 71 in 1978 to 232 in 1980), the criterion of having all 114 WTG represented was half-way achieved by the final program year. In a similar fashion, slightly more than two-thirds of the USOE clusters were represented, a pattern typical of the first year clusters. The number of resources within sites did not reach the criterion of five - a median of two was observed. The three parts of the criterion were not reached but a wide range existed..

Table I

Experience Sites Classsified by Worker Trait Groups

Worker Trait Group	Number of Sites			Occupation Codes*
	1978	1979	1980	
4 Art Work	-	1	1	1,2,9
5 Artistic Restoration, Decoration and Related Work	1	1	1	0-1,2,3,5
6 Administration	4	13	11	0-1,3
9 Supervisory Work (Clerical, Sales, and Related activities)	1	6	6	1,2,3,9
10 Managerial Work	3	11	10	0-1,2,3,4,9
11 Consultative and Business Services	2	-	-	0-1
12 Interviewing, information giving and related work	1	3	3	1,2
13 Accounting, Auditing, and Related work	1	1	1	1
15 Corresponding and related work	1	1	1	2
16 Information gathering, dispensing, verifying, and related work	6	13	16	0-1,2,3,9
17 Scheduling, Dispatching, Expending and Related Work	-	1	1	1,2,3,5,9
18 Secretarial and Related	5	8	8	2,9
19 Facilities, Services and Movement Allocating and Expediting Work	-	-	1	0-1,3
20 Paying and Receiving	1	1	2	2
21 Cashiering	-	1	-	2,3
22 Inspecting and Stock Checking	-	3	2	0-1,2,3,4,5,6,7,7,8,9
23 Typesetting, reproducing and related machine work	2	2	1	2,6

*Four sites were not assigned a WTG in 1979 list and 20 sites in 1980.

Table I (continued)

Worker Trait Group	Number of Sites			Occupation Codes
	1978	1979	1980	
24 Classifying, filing and related work	3	5	5	1,2,3,4,5,9
26 Computing and related recordings	2	4	5	1,2,3,5,8,9
27 Sorting, inspecting, measuring and related work	1	1	-	0-1,2,3,4,5,6,7,8,9
28 Typing and Related Recording	-	1	1	1,2
29 Routine checking and recording	1	1	1	0-1,2,3,5,6,7,9
30 Switchboard Service	2	2	1	2
32 Guidance and Counseling	-	1	3	0-1
33 Supervisory Work (Working Supervisors)	6	9	9	0-1,2,3,4,5,6,7,8,9
34 Supervisory Work (Nonworking Supervisors)	-	1	1	4,5,6,7,8,9
36 Cooking and Related work	-	1	1	3
37 Craftsmanship and related work	2	8	13	2,3,4,5,6,7,8,9
38 Precision Working	1	3	3	3,4,5,6,7,8,9
39 Manipulating	1	2	3	2,3,4,5,6,7,8,9
40 Supervisory and Instructive Work (Nursing and Related services)	-	2	2	0
42 Vocational Education	-	-	4	0,1
44 High School, College, University and Related Education	-	-	1	0
45 Kindergarten, Elementary School and Related Education	-	2	3	0
52 Handling	-	1	2	2,3,4,5,6,7,8,9
55 Engineering, Scientific and Technical Coordination	1	3	2	0-1,9

Table I (continued)

Worker Trait Group	Number of Sites			Occupation Codes
	1978	1979	1980	
56 Drafting and Related Work	1	1	1	0,2
57 Technical Work, Engineering and related fields	1	1	1	0-1
67 Radio Announcing and Related Work	-	1	2	1
72 Cropping, Animal Farming, Gardening and Related work	-	-	1	4
74 Investigating, protection and related work	1	2	3	0-1,2,3,4
75 Materials and analysis and related work	1	4	4	0-1,4,5,9
78 Legal and Related work	1	1	2	1
82 Operating-Controlling	2	3	4	1,2,3,4,5,6,7,8,9
85 Supervisory Work (Service and related activities)	3	2	3	1,3
87 Scientific Research	-	1	2	0
90 Medical, Veterinary, and related services	-	5	7	0
91 Therapeutic and Related Work	1	1	1	0
92 Nursing, X-ray, and related services	3	3	3	0
93 Child and Adult Care	-	1	2	3
94 Promotion and Publicity	1	-	1	1
95 Purchase and Sales Work	2	3	6	1,2,4,9
96 Sales and Service work	1	1	1	2,6,7,8
97 Demonstration and Sales Work	3	14	17	2

Table I (continued)

Worker Trait Group	Number of Sites			Occupation Codes
	1978	1979	1980	
101 Beautician and Barbering Services	1	1	1	3
102 Customer Service Work, n.e.c.	-	4	6	2,3,6,9
104 Accommodating Work	1	1	2	3,4
105 Miscellaneous Personal Service Work	-	2	-	3,9
112 Creative Writing	-	1	2	1
113 News Reporting and Related Work	-	-	1	1

The number indicates occupational categories in the Dictionary of Occupational Titles (3rd Edition). Thus, the worker trait groups occur in the specified categories, designated by number and title listed in Summary Table 2.

Table 2

Number of Sites by USOE Clusters

USOE Cluster	Number of Sites		
	1978	1979	1980
1. Business and Office Occupations	35	84	79
2. Marketing and Distributing Occupations	8	26	24
3. Communications and Media Occupations	-	1	1
6. Transportation Occupations	-	1	2
7. Construction Occupations	1	1	1
8. Manufacturing Occupations	8	27	29
9. Public Service Occupations	3	18	22
10. Health Occupations	5	12	14
11. Fine Arts and Humanities Occupations	1	4	4
13. Communication and Media Occupations	4	8	7
14. Hospitality and Recreation Occupations	1	-	-
15. Personal Service Occupations	5	15	16

Criteron B. At least 30% of the resource pool are in either professional or technical fields.

Instrumentation and resources. The WTG in the Dictionary of Occupational Titles (3rd ed) Volume II were examined for occupational categories that jobs within the WTG were classified by; the lists of experience sites were classified by WTG in 1978, 1979, and 1980 and the Missouri Area Labor Trends November 1977 and Top 30 in employment in Region 13 were compared.

Results. The data in Table 3 indicate the distribution percentages of the Top 30 occupational categories and of the possible sites available in each category for the three years. In each year the criterion was reached: 35% in 1978, 68% in 1979, and 60% in 1980 of the sites might be classified in professional, managerial and technical trades.

Conclusion. The number of experience sites in professional, managerial, and technical fields reached the criterion.

Criterion C. At least 20 resources are developed in each of the following academic fields: mathematics, science, English, and social studies.

Instrumentation. Appalachian Educational Laboratory (AEL) Student Program Guide: matrix of experience sites subject matter by worker trait group.

Results. Data are not shown. The guides developed for each site, however, offer the possibility for utilization of nearly every subject matter discipline on each site. The only constraints may be found in more narrow subjects such as algebra where general mathematics could be used, but algebra can not.

Conclusion. The criterion of at least 20 resources in the four subject matter areas was reached.

Table 3

Summary of Possible Experience Sites
in Occupation Categories

Occupation Category Code (1st number)	Top 30 in Employment	Percent Experience Sites Possible[a]					
		1978		1979		1980	
	%	N	%	N	%	N	%
0-1 Professional, Managerial Technical	0	25	35	110	66	120	60
2 Clerical and Sales	6.6	23	32	114	68	140	71
3 Service	26.6	18	25	99	60	108	54
4 Farming, Fishing, and Forestry	16.6	12	17	57	34	68	34
5 Processing	0	10	14	47	28	54	27
6 Machine Trades	3.0	7	10	39	23	46	23
7 Bench Work	16.6	8	11	33	20	38	19
8 Structural Work	10.0	8	11	36	22	43	22
9 Miscellaneous	20.0	15	21	83	50	108	54

NOTE: Experience sites may be related to more than one occupational category as as shown in the "N" column of Table 1.

NOTE: The WTG experience sites were located in Pettis County (work force employed in November, 1977, was 14,339) while the Top Thirty refer to 1975 data covering an additional three counties with over 37,000 employed in 1977. The additional counties are similar to Pettis in economic outlook and structure, although Pettis had a higher rate of unemployment in November, 1977.

[a] N = 71, 1978
N = 166, 1979
N = 232, 1980

PROGRAM OBJECTIVE 2

The enrollment of students in EBCE will be representative of the total population (on demographic variables such as age in grade/sex/ locale distributions of the total student population and abilities and interests).

Instrumentation and Resources. The distribution of data from the Student Information Questionnaire including: plans, mothers' and fathers' educational level and occupation; pretest comparison of the distribution and means on Tests of Academic Progress for subtests Composition, Reading, and Mathematics; pretest comparison of the distribution and means on the Career Development Inventory Preferred Occupational Group and strength of that preference.

Results. All 1978 10th grade students who were present (N=162) completed most of the pretest assessment. The data for the 11th grade students are available only for the EBCE and the nonequivalent control group students.

Participation by sex is shown in Table 4. The EBCE and control

Table 4
Distribution of Students by Sex

	Total		EBCE		Control	
Sex	N	%	N	%	N	%
Grade 10						
M	82	51	15	37	13	34
F	80	49	26	63	25	66
Grade 11						
M			4	40	5	40
F			6	60	8	60

students have different distributions in comparison with each other and with the population in Grade 10 but are similar to controls on the basis of sex in Grade 11 groups.

Grade 10

The EBCE and control 10th grade students were compared with the remainder of the population on the Tests of Academic Progress and the Career Development Inventory. EBCE and control distributions were compared and were similar (see Table 5). The group, sex, and group by sex means were generally nonsignificant, also as summarized in Table 5 and, in Table 6, for Semantic Differential concepts.

The results of the chi square comparison of Preferred Occupational Groups are shown in Table 7 for EBCE and Control with the remainder of the population. The distributions are difficult to interpret because of the large number of categories and few numbers but appear generally similar.

Strength of preference for the Preferred Occupational Group was compared for EBCE and Control (low means indicate higher strength of preference). The mean difference was significant, as shown in Table 8 with EBCE students having stronger preferences.

The data for parents' level of education and parents' level of occupation were compared between EBCE and control, as shown in Tables 9 and 10. No differences were observed.

Plans for after high school were compared between EBCE and control students. The data in Table 11 indicate no differences.

The EBCE and control students therefore appear to represent the general population and to be similar to each other.

Grade 11

The only difference observed for grade 11 students was in CDI II, where the wide variability both prevented use of the t test and yielded significant difference on the Mann-Whitney U. Otherwise the students were similar to control students on academic and career tests, rating scales, and demographic variables (see Tables 12 through 17).

Table 5
Summary of Analysis of Variance of
EBCE and Control Boys and Girls on Career
and Academic Tests: Pre-test

Grade 10

Test	F ratio Group	Sex	Group x sex	df
Tests/Aca P.				
Comp.				
with cn	1.09	.31	.16	1, 66
pop	1.62	2.25	.08	1,204
Rdng.				
cn	3.48	.66	.13	1, 66
pop	2.12	4.27*	2.15	1,204
Math.				
cn	2.07	.04	.43	1, 66
pop	4.06*	.34	.16	1.204
Career Dev.				
I. PT				
cn	1.44	.18	.20	1, 67
pop	.94	.09	.10	1,205
II. Res.				
cn	1.12	.05	.00	1, 67
pop	2.63	.05	.22	1,205
III. Dec.-M				
cn	2.72	5.13*	.06	1, 67
pop	1.76	19.64*	1.10	1,205
IV. Info.				
cn	1.54	4.51*	.02	1, 67
pop	.23	19.04*	2.57	1,205
V. Work				
cn	.31	2.35	1.17	1, 67
pop	.94	5.84*	3.33	1,205
VI. POG Kn				
cn	1.03	2.77	1.78	1, 65
pop	.01	2.11	.97	1,203

* $P < .05$ Girls' means higher, EBCE means higher where significant

Table 6
Summary of Analysis of Variance for
Semantic Differential and SIQ for
EBCE and Control Boys and
Girls in Grade 10: Pretest

Semantic Differential		F ratio						
		Sex		Group		Sex x Group		
		F	Pr>F	F	Pr>F	F	Pr>F	
MY COMMUNITY								
	cn	.00	.98	.44	.51	3.70	.06	1,64
	pop	.69	.41	.06	.81	2.26	.13	1,154
SCHOOL								
	cn	.00	.96	.12	.73	1.31	.26	1,63
	pop	.47	.49	1.88	.17	.97	.32	1,152
MYSELF SPENDING LIFE IN MY HOMETOWN COMMUNITY								
	cn	.36	.55	1.24	.27	.02	.90	1,61
	pop	.37	.54	.01	.93	.08	.77	1,150

Rating scales

Table 7
Preferred Occupational Group Distribution for
EBCE and Control Students Compared with
Remainder of Population

Grade 10

P.O.G.	Popu.		Pre EBCE		Post		Pre Control		Post	
	N	%	N	%	N	%	N	%	N	%
Math/Phy Sci	-	-	-	-	-	-	2	5	-	-
Eng/Appl Sci	7	4	1	2	-	-	2	5	3	11
Medi/Life Sci	13	8	5	12	3	10	-	-	-	-
Medi Related	7	4	4	10	3	10	3	8	3	11
Busi Analyti	3	2	-	-	-	-	1	3	-	-
Busi Adm	5	3	1	2	2	6	-	-	1	4
Busi Sales	5	3	-	-	1	3	1	3	-	-
Perf Arts	5	3	-	-	2	6	1	3	1	4
Literary/Legal	7	4	-	-	-	-	1	3	-	-
Soc Sci	-	-	1	2	-	-	1	3	-	-
Ed/Hum Welfare	11	7	6	14	8	26	1	3	3	11
Technical	2	1	-	-	-	-	1	3	-	-
Crafts/Trades	24	15	5	12	6	19	7	18	5	18
Agri/Forestry	27	17	-	-	-	-	1	3	1	4
Mech/Opera	5	3	2	5	1	3	-	-	-	-
Attendants	3	2	-	-	-	-	2	5	-	-
Clerical	10	6	5	12	2	6	3	8	3	11
Pers/Prot Serv	10	6	4	10	-	-	5	13	1	4
Sales/Display	-	-	-	-	1	3	1	3	1	4
Sports/Entert.	11	11	8	20	2	6	4	10	6	21

Table 8
Means and Standard Deviations for EBCE and Control on Strength of Preference for Preferred Occupational Group on the Career Development Inventory

	EBCE						Control					
	Pre		N	Post		N	Pre		N	Post		N
	$\bar{X}$	SD		$\bar{X}$	SD		$\bar{X}$	SD		$\bar{X}$	SD	
Strength of Preference	1.6	.89	37	2.03	.80	34	2.08	.16	37*	2.3	1.00	27

*$p < .05$
Pre $t = -3.26$
Post $t = -1.26$ NS

Table 9
Frequency of Educational Level of Mothers
and Fathers of EBCE and Control Students

Grade 10

EDUCATION	MOTHER						FATHER					
	Rest of Popu.		EBCE		Control		Rest of Popu.		EBCE		Control	
	N	%	N	%	N	%	N	%	N	%	N	%
None	--		--		--	--	--		--		--	--
Elementary School	9	5	3	7	--	--	11	7	0	0	1	4
Some High School	27	16	9	22	6	21	33	20	8	20	4	14
High School Graduate	90	55	21	51	12	41	79	48	19	48	11	39
High School Plus Post High (Tech., Bs., Juco, College)	28	17	4	10	9	31	28	17	10	25	6	21
College Graduate	7	4	4	10	1	4	11	7	2	5	3	11
Some Graduate Work	1	1	0	0	1	4	--	--	--		--	--
Advanced Degree	2	1	0	0	--	--	1	1	1	3	3	11
Information Not Available	3	--	--	--	--	--	4	--	2	--	1	--

Non-significant

Table 10
Frequency of Mothers' and Fathers' Occupations
for EBCE and Control Students

Grade 10

OCCUPATION	Rest of Popu.				MOTHER				FATHER			
	Moth.		Fath.		EBCE		CONTROL		EBCE		CONTROL	
	N	%	N	%	N	%	N	%	N	%	N	%
Clerical	19	2	2	1	5	12	6	21	1	2	1	4
Crafts	1	--	31	18	--	--	1	4	9	21	5	18
Farm	4	2	36	23	--	--	--	--	1	2	3	11
Homemaker	73	45	--	--	15	32	15	52	--	--	--	--
Laborer	6	4	29	19	1	2	1	4	13	31	3	11
Manager/Adm.	3	2	17	11	2	5	1	4	3	7	--	--
Military	--	--	2	1	--	--	--	--	1	2	4	14
Operative	17	11	14	9	6	14	3	10	9	21	2	7
Professional	13	8	4	3	4	10	2	7	3	7	4	14
Owner	6	4	10	6	--	--	--	--	1	2	--	--
Protective Serv.	--	--	1	--	--	--	--	--	--	--	1	4
Sales	7	4	8	5	5	12	--	--	1	2	3	11
Service	12	7	1	--	3	7	--	--	--	--	1	4
Technical	--	--	2	1	--	--	--	--	--	--	1	4
Information Not Available	--	--	10	--	1	2	--	--	--	--	1	--

EBCE chi square non significant with population and with control

Father X^2=20.0, df=12(pop)
Father X^2=20.8, df=12(cn)

Mother X^2=12.4, df=11(pop)
Mother X^2=10.0, df=9(cn)

Table 11
Frequency of Plans* After High School
For EBCE and Control Students

Grade 10

	Remainder of popu.		EBCE				Control			
			PRE		POST		PRE		POST	
	N	%	N	%	N	%	N	%	N	%
Work full time	52	32	12	29	9	26	7	24	9	32
Apprenticeships/OJT	5	3	1	2	1	3	0	0	-	-
Military or academy	8	5	1	2	2	6	2	7	3	18
Homemaker	2	1	1	2	-	-	1	3	-	-
AVTS, Tech, or Bs School	16	10	2	5	2	6	5	17	3	11
Academic junior college	9	6	2	5	3	8	0	0	-	-
Tech, voca. program (juco)	6	4	1	2	1	3	1	3	1	4
4 year college	44	27	12	29	14	40	7	24	5	18
Work part time	12	7	2	5	1	3	1	3	3	11
Other	8	5	8	19	2	6	5	17	2	7
INA	5	-	0	-	-	-	0	0	-	-

* First Choice

No chi square test could be run because of small cell sizes

Table 12
Summary of t Tests for
EBCE and Control Boys and Girls on Career
and Academic Tests
Pre-Tests
Grade 11

Test	EBCE $\bar{X}$	EBCE SD	Control $\bar{X}$	Control SD	t
Tests/Aca Progress					
Rdng.	48.4	10.2	49.8	7.3	.37
Math.	45.9	6.6	46.4	7.5	.15
Career Dev.					
I. Pl.	101.4	21.3	92.3	12.8	-1.18
II. Res.	14.75		7.59		17.5[a]*
III. Dec-M.	17.1	4.5	19.0	5.9	.83
IV. Info.	19.7	6.5	17.4	4.5	-.92
V. Work	15.1	4.5	15.7	6.1	.27
VI. POG Kn.	20.2	4.1	19.8	3.7	-.22
Seman. Dif.					
Comm.	41.0	6.3	40.3	7.5	-.24
School	28.9	12.4	38.0	9.2	1.89
Myself Community	36.9	11.5	41.0	9.0	.90

[a]Mann Whitney U p = .008 on comparison of ranks, z = -2.64

*p < .05 EBCE N = 10 Cn N = 11

Table 13

Means and Standard Deviations for EBCE & Control on Strength of Preference for Preferred Occupational Group on the Career Development Inventory

Grade 11

	EBCE					Control				
	Pre		Post			Pre		Post		
	$\bar{X}$	SD	$\bar{X}$	SD	N	$\bar{X}$	SD	$\bar{X}$	SD	N
Strength of Preference	1.2	.4	1.5	.8	8	2.2	.8	1.6	.5	9

Note: Pre-test 1= Strong to 5= Low; t=3.58 $p < .05$
Post-test 1= Strong to 5= Low; t= .17 NS

64

Table 14

Frequency of Educational Level of Mothers and Fathers of EBCE and Control Students

Grade 11

EDUCATION	MOTHER		FATHER	
	EBCE	CONTROL	EBCE	CONTROL
	N	N	N	N
None	-	-	-	-
Elementary School	-	-	-	-
Some High School	3	4	3	3
High School Grad.	3	6	1	4
High School Plus Post High (Tech., Bs., Juco, College)	2	2	-	3
College Grad.	1	-	2	2
Some Graduate Work	-	-	-	-
Advanced Degree	-	1	1	1
Information Not Available	1	-	3	-

Table 15
Frequency of Mothers' and Fathers' Occupations
for EBCE and Control Students

Grade 11

OCCUPATION	MOTHER		FATHER	
	EBCE	CONTROL	EBCE	CONTROL
Clerical	2	3	-	-
Crafts	-	-	2	1
Farm	-	-	-	1
Homemaker	3	6	-	-
Laborer	-	-	1	1
Manager/Adm.	-	2	1	4
Military	-	-	-	1
Operative	2	-	3	1
Professional	-	1	1	1
Owner	1	-	1	1
Protective Serv.	-	-	-	-
Sales	-	1	-	2
Service	2	-	-	-
Technical	-	-	1	-
Information Not Available	-	-	-	-

Table 16
Frequency of Plans After High School
For EBCE and Control Students

Grade 11

	EBCE		Control	
	PRE	POST	PRE	POST
Work full time	1	3	1	-
Apprenticeships/OJT	2	-	2	2
Military or academy	-	1	-	1
Homemaker	-	-	1	-
AVTS, Tech, or Bs School	3	1	2	3
Academic junior college	2	1	2	1
Tech, voca. program (juco)	-	1	-	2
4 year college	2	1	4	2
Work part time	-	-	-	-
Other	-	-	1	-

Table 17

Distribution of Preferred Occupational Group for EBCE and Control Students in Grade 11

P.O.G.	EBCE		Control	
	PRE	POST	PRE	POST
Eng/Appl Sci	1	0	0	0
Math/Phy Sci	0	0	4	3
Medi/Life Sci	0	0	4	2
Medi Related	0	0	2	1
Busi Analytic	1	1	2	3
Busi Adm	0	1	0	0
Busi Sales	1	0	1	1
Perf Arts	1	0	0	1
Literary Legal	1	0	0	0
Ed/Hum Welfare	1	1	0	0
Crafts/Trades	1	1	0	0
Attendants, Helpters, Leaders	0	1	0	0
Pers/Prot Serv	2	1	0	0
Sports/Enter	2	2	0	0

PROGRAM OBJECTIVE 3

The program will promote the integration of academic, vocational, and general education.

Criterion A. At least 95% of the EBCE students will have earned at least one academic credit through EBCE projects, under specific agreements with local educational agencies.

Instrumentation and Resources. Compilation of credits, based upon .5 credit per semester in language arts, math, science, social studies or career development.

Results. More than 95% of the 10th and 11th grade students completed at least one academic unit with the range from 0 to 3.

Conclusion. The criterion was successfully met.

Criterion B. At least 95% of the EBCE students will have completed at least one site exploration.

Instrumentation and Resources. Activity sheets (AS)

Results. The number of site explorations (see Table 18) met the criterion. During the first semester (ending January 15, 1980), 408 placements, an average of 8.16 per student, had been made. This is an increase of 2.16 over the average 6 site explorations made in the spring semester, 1979. For the year, 719 placements, averaging 15 per student, were made.

Conclusion. The criterion was met successfully.

PROGRAM OBJECTIVE 4

The program will increase the relevance of education to employment and functioning in society.

Criteria A and B. At least 60% of the EBCE students in the program perceive EBCE as helping to prepare them to make informed career decisions. At last 60% of the EBCE students perceive the program as increasing the relevance of their educational program to future plans.

Instrumentation. Questions on the Student Information Questionnaire ratings and plans, CDI Preferred Occupational Group and strength of preference.

Results. Grade 10 students, following completion of EBCE for the year replied to the question of usefulness of EBCE for their own plans. About 65% of the EBCE students, compared with 58% of the controls, rated the question at a "6" or "7": This met the criterion even though tere was little difference between EBCE and control students' post-test responses.

Following participation in EBCE during fall semester, grade 11 students' replies to "How useful for your own plans do you believe that experiencing a career in its own setting has been" ("would be" for control students) were analyzed by t test. A t of -1.15 (NS) was obtained for EBCE mean ($\overline{X}$) = 6.0, and standard deviation (SD) = 1.1, number (N) = 8 compared with controls' $\overline{X}$ = 5.3, SD = 1.7, and N = 11. Thus while the EBCE mean was higher it was not significantly so. About 75% of the EBCE students compared with 54% of the controls rated the question at a "6" or "7".

The shifts in Preferred Occupational Group (see Tables 7 and 17) were far greater for EBCE students than for controls. Strength of that preference was not significantly different following EBCE for participants vs. controls while a significant difference (with EBCE higher) had been observed pre-project (see Tables 8 and 13).

Criterion B. At least 60% of the EBCE students perceive their EBCE program as increasing the relevance of their educational program to their future plans (or clarifying these plans).

Results. Results cited for post-test in Criterion A and students "next step plans" indicate EBCE students made specific plans.

The Grade 10 students indicated that they would finish high school, consult with the counselor, make plans to take courses at the vo tech school or community college, and others related specific courses, such as clerical or industrial arts that would be important to the career cluster chosen: typing, marketing and so on. Additional selections were seated in apprenticeship, service, or travel and work part-time options, with six students indicating no kowledge of future next step plans. Others indicated that options such as welding and law were very specific career directions.

Grade 11 students replied to the openended question on the SIQ (post test form) "What is the 'next step' you will take in your career training with:

"National Guard, to prepare for the Army."

"Take courses in my senior year to prepare for my college major."

"Take the necessary classes needed for the career I want."

"Talk to counselors about college courses."

"Finish school."

"Go back and start doing what I'm going to do at home."

"Go to work for a business full time."

"Finish high school, work for railroad or try to get in acting school."

"Wait til I finish training."

The control group replies were not qualitatively different:

-three were going to enroll at the community college specifically (one in electronics)

-one was going to business school

-one gave no reply.

-four said finish high school (one indicated nothing was being done other than this; one said the courses would be related to college; one said work full-time the summer before senior year; and one that during senior year membership in FTA and being a teachers aide would be included).

-one said "may go into the service and get more training there."

-one said "an apprenticeship."

Conclusion. The criteria were generally met.

PROGRAM OBJECTIVE 5

The program will encourage development of attitudes, skills, and knowledge enabling students to cope with accelerating societal change.

Criterion A. At least 70% of the students' projects show activities related to 1.) developing skills of problem-solving; 2.) acquiring, using, and communicating information; 3.) working effectively with others; or 4.) acquiring and using subject matter knowledge and skills in solving practical problems.

Instrumentation. The students' Activity Sheets.

Results. The data in Table 18 and an informal reading of the students' Activity Sheets indicated that the critical thinking skills (Inquiry) and the quality of assignments completed (Product) had median ratings of "3" for grade 10 and grade 11 students. The median number of activities completed for the specific subject matter are as is also reported in Table 18.

Criterion B. At least 80% of the students completed more than one exploration in a career cluster or in more than one career cluster.

Instrumentation. Activity Sheets.

Table 18

Frequency of Activity Sheet[a] Subject Matter Completed Assignments for Grade 10

Subject	N
Career Planning	880
English/Comp.	
Creative Writing	14
English	552
Speech	62
Natural Science	
Earth Science	57
Envi. Studies	110
General Science	13
Health	7
Special Topics	161
Social Studies	
American History	212
Current Events	52
Citizenship & Law	29
Civil War	29
Geography	56
World History	179
Mathematics	
Consumer Math	229
Functional Math	30
Geometry	71
Personal Fiance	147
Pre Algebra	12

[a]Ratings were given for Activity Sheets, Goal (on time), Inquiry (critical thinking skills), and Product (quality).

Results. All students completed more than one exploration in at least one career cluster and also also explored more than one of the eleven clusters. The range of Activity Sheets completed in grade 10 was 55 to 120, with a median of 72.

Criterion C. At least 80% of the EBCE students' post-high plans relate to further training.

Instrumentation. Student Information Questionnaire (post-test form).

Results. The data in Table 11 and Table 16 show that more EBCE students shift to include work full-time in their plans following high school than control students do, although this may also be accompanied by plans for training, too (no cross tabulation shown).

Conclusions. Criteria A and B were met and Criterion C was not. Therefore, attitudes, skills, and knowledge may be considered adequately developed.

PROGRAM OBJECTIVE 6

The program will foster positive attitudes in the community and school toward experience-based learning as a legitimate educational activity.

Criterion A. At least 80% of the participating resource people express support for EBCE as a needed alternative program, commit to continued participation, and would recommend participation to friends or co-workers.

Instrumentation. Mail Survey.

Results. There were 63 replies out of 162 surveys sent to resource persons. The data in Table 19 show those responding strongly support the project and would recommend it to friends. The comments furnished to openended questions were copied into Tables 20 and 21. These comments reflect subjective, qualitative evaluations and may be generally construed as favorable.

Table 19

Means and Standard Deviation
Results of Mail Survey

Question	Resource		Parents		Teachers	
	M	SD	M	SD	M	SD
1. Would you recommend EBCE to students?	5.6	1.9	5.9	1.6	4.0	2.0
2. Does EBCE offer a needed alternative program to the traditional h.s. curriculum?	5.6	1.9	5.4	2.1	4.7	2.3
3. Would you recommend EBCE to colleagues?	5.6	1.9	5.7	1.9	3.8	2.0
4. Was the EBCE project adequately staffed and planned?	5.8	1.6	5.7	1.6	3.7	2.1
5. Does EBCE help students make informed career decisions?	5.2	1.8	6.3	1.3	4.6	2.1
6. Does EBCE make clear the relevance of education to a future career moreso than the usual high school program does?	5.2	2.0	6.3	1.2	4.2	1.1

Note: Resource Persons N = 63 (out of 162 sent)
Parents N = 18 (out of 48 sent)
Teachers N = 6 (out of 15 sent)

Table 20

Replies to "how would you describe EBCE?"

Resource Persons (N=63)

A fine program for those who are interested and not just wanting to get out of school.

Good for those students who have specific careers of work in mind. The program provides too much an outlet to get out of class for some who have no specific job goals.

Enables students to observe various professions first hand as opposed to just reading about them.

Hopefully it helps motivate them in a field that without this program they wouldn't have considered. I personally hope that it helped them to continue in education.

(No comment.) (N=7)

I have only had one student recently so I many not know that much about the program.

Good idea.

You are there. Life is not always a rose garden. An opportunity to focus one's eye on the real world at a safe distance.

It is a program to show the students what to expect in different job titles and what is required in these job levels to meet the requirements of the job or fulfill the job.

It shows the students what is done in different occupations and what is required of them.

An opportunity to learn what the job or profession is like before making it a career.

Very good for certain students.

Good program for learning and experience.

As an opportunity to see how their education is preparing them for the business community.

Useful but not definitive.

I think it is important that kids understand that a job can be boring and dull some days no matter what it is. It's important you pick a job you can like most of the time.

Students should be on site for a full workday.

Table 20 (continued)

Good program if students are honestly interested in a particular occupation.

Very good experience for this age child.

Make-work.

Good idea.

Expensive.

You can tell if the person has any initiative orjust going along for the ride.

A good idea for a student that is more mature mnetally than the students that we have had.

A way to get out of regular class.

A project in which students get first hand practical on-the-job training into a particular field or profession.

A career learning experience which not only gives the student an opportunity to view one field but acquaints her or him with the outside world of free enterprise.

On-the-job feel of career opportunity.

Still finding its way but a positive force in education.

A program that gives students an opportunity to observe actual business functions in the actual business environment.

I find EBCE a very good idea, and a great approach to education. The only problem I saw was the students that were not mature enough for the program and not responsible enough to apply themselves and this was another way of getting out of class. Not all were like this, but some were.

Excellent.

Good training for high school students-gives 1st hand experience.

An opportunity to observe and experience the real world of work and thus help the student become more selective and prepare for their area of interest.

A worthwhile opportunity for a student to get first hand experience that he or she may make a more positive decision regarding their life's vocation.

Insight to possible job opportunities.

It is a good program to introduce young people to the job market. Need more guidelines to set up definite monitoring of specifics learned.

Fair.

A program where students can observe on the job and help them to choose a career

in their field of interest.

Adequate or above.

I feel EBCE is a preview program to give young people practical experience and insight into various job sites.

I was asked to participate in the EBCE program approximately one year ago, and volunteered to do so. I was never contacted by any of the college personnel in regard to what my responsibilities were, or what I should be expecting of the students that were sent to me. As a result, the students that were sent to me spent their time passively sitting and watching me do my job. I do not see this as an educational experience. In order to benefit from an experience, a person must be actively involved and something must be expected of the person beyond simple observation. Though I have been very disappointed in my contact with the EBCE program, it does have one redeeming quality. It is possible that the students will realize that they do need an education if they are to survive in the adult world.

Need exposure to business world.

Need a course in business economics.

A way for marginal students to get out of class work.

Not allowed to do enough -- for the most part acted as if it were a way to get out of school.

Good for some types of business, not long enough for others.

It provides students with observance and knowledge of what goes on in the everyday work world, and might dispel any misconceptions they may have had about what goes on "behind the scenes".

Much better experience this year with program. I feel that the program is dependent on student. If he is interested, there will be benefits.

Helpful to students who were interested in this area and helpful to us if the student wants to work and was interested in this area.

A well need program for today's students; something we didn't have back in the 50's.

Worthy project.

A good program.

The length of time spent at my site was not long enough and the hours spent were at a lax time. None of the students I had could know what my job really consists of except lunch break, delivering mail, and making posters. I would hate to think that was all my job was. I tried explaining it to them and to all but two or three, the response was yawning, looking around the ceiling and watching their feet.

Table 20 (continued)

Extended career education outside high school curriculum which might be more effectively accomplished with in-school career education for much briefer periods...career education is undoubtedly valuable, but not to the sacrifice of much needed (for future career) basic skills.

Very good for students.

Good program needing to be communicated.

Parents (N=18)

As a needed help for students to go along with their book learning.

(No comment) (N= 2)

Good.

A look at real life in the job field.

I don't feel the program was as bad as maybe our answers indicate. But when the program went to ½ day, it lost a lot of its effectiveness. I feel it has helped out student know-how to apply for a job and meet people. Our student said that it was not possible to visit some of the sites that were the first choice.

A good experience for kids to get out and experience meeting other people and get ideas about how it is to work out. I think it should be continued.

My daughter says it teaches a lot about different careers; we were not very happy with the program. We think it's used to get out of school. For instance, riding around in a police car - how is that helping with career planning? So many times there were not job sites available that she was interested in, so she went to a site and goofed off. We think she'd been better off in school. I hope she learned something, but we were not aware of it. Sometimes the person in charge of getting her a site forgot or something and no place for her to go. Poor planning -- in-house teachers: some did a very poor job of teaching. The previous year was much better than this year. This year going over the noon hour was bad situation.

It has given my daughter insight into a lot of different jobs and she has received a lot of good training at several job sites.

Best thing to happen to education since the "ABC's".

The EBCE program gave my son a look at the work world and opportunity to know some of the jobs that are available.

It gave my daughter the chance to explore some resource sites as career choices• helped her to see the pros and cons of the work world!

It was a good program.

Okay.

I think EBCE gives the student a better understanding of the business world and its operations. I think it is a very good program. Keep it up.

It gives a student a broad perspective of different occupations and jobs. This experience is very valuable to young persons. It is a good supplement to the usual high school program but it should not take its place. Every student all the way through Grade 12 needs the basics.

Is a very worthwhile program which I think is much needed for the students to help them find the career they are interested in.

It is a good program to help a person decide a career choice.

I am going to let my son answer this survey: I do think it made him realize the importance of a high school diploma. There is an air of "dumbyism" for students particpating in EBCE. It is an alternative to classroom education but I am not sure it is the right one. Why can't we teach as much in 13 years as my grandmother learned in 8?

Teachers (N=6)

Gives students a good idea of what the program he is attending consists of and whether or not he would be interested in the course.

I did not know what the student was supposed to do in my classroom, what was expected of me, should the student participate, WHAT?

(No comment) (N=1)

It would be great for students who are gifted or above average students who are so far ahead of classmates they need extra activities.

Students see EBCE as "time off or free time" from school - a farce.

Seems like a good program.

Table 21

Replies to "What one thing would you change about EBCE?"

Resource persons (N=63)

No comment (N=19)

Nothing or none (N=8)

Students being screened better:

Better screening of students for job.

Tougher screening for more mature students.

Get a higher quality student.

More selective in student choice.

Student training:

Do not approve such extended removal of students from high school curriculum.

More staff contact with students on sites.

Stress the importance and monitor closely.

In order for this program to be a real benefit, all volunteers should be invited to a meeting with the college faculty, receive specific instructions as to what the program is trying to accomplish and how they can be of assistance. There should be recommended activities and responsibilities in each given area, and some way of reporting back to the college faculty.

Tailor it more to students' job interests..

More interface between students and EBCE counselors on sites selected for the project and limitations of the owrk force involved.

Have students prepare a list of questions to ask resource person each day before starting based on what learned previous day.

Put the student through a class of economic first.

Place kid in area he is more familiar with.

Table 2[illegible] (continued)

Make sure before you send a student out , find out who he or she wants to observe. We have had some who didn't know what position they wanted to observe.

Time scheduled with resource person.

Students would have to call in sick, etc.

Timing:

All day program instead of only 2 hours at a place.

Have the student in a work placelonger. The student does not get a real picture of the established work area by being there at the same time everyday and for two weeks only.

Make sure the student was here at a time that would show them how the office worked instead of during the noon hour. (N=3)

The students need more time on the job site.(n=4)

Length of tenure.

Time planning.

Have student work one full day a week on job site and have actual area of responsibility.

Time

If possible have flexible schedule.

Student should be on site for a full workday.

At my site two hours didn't seem a long enough time - I would appreciate a longer day with student - even if it meant fewer days total.

Better time on job:a name tag so to know who they are.

Time at site is poor.

Parents (N=18)

No comment (N=8)

Way job sites are chosen.

82

Table 21 (continued)

Be more selective in enrollees.

Go to full day program.

Pay the kids for their work - most jobs they did as much or more than the people at the places they worked.

The time of day at the job site.

More time in English to discuss and find out what was expected of them.

Let the students work on their sites.

Make it available to more students.

Give the student more time with teacher "L.C.".

Teachers (N=6)

No comment (N=3)

The hours - not convenient to our school schedule.

I believe some students would profit more from a traditional school setting.

Abandon it.

As in previous years, comments centered around maturity of the students and time schedules as far as things to be changed, although previously the implications were that all year and half a day would be the best scheduling, this year reflected emphasis upon all day or longer tenure. Most of the favorable comments describing EBCE focused on the positive understanding of the workworld that was possible through having experienced a job in its setting - with is boring periods and periods of detail work.

The ratings concerning EBCE by resource persons were received from about 39% of those participating, so that not enough were received to test the criterion. The means and standard deviations indicate that fairly uniform ratings toward the positive side were made by those resource persons responding to the questionnaire.

Criterion B. At least 75% of the EBCE students support EBCE as a needed alternative program.

Instrumentation. Student Information Questionnaire.

Results. The data for Grade 10 in recommending the EBCE program to friends indicate that about 57% of the EBCE students rated this question at a "6" or "7", while 37% of the controls did. Adjusted means for the EBCE and Control groups showed a nonsignificant difference with pre-ratings co-varied from the posttest scores before analysis. Thus, while, the criterion was not met, the Grade 10 students substantially rated higher the possibility of recommendations than controls did.

Grade 11 students' ratings of the question "Would you recommend an experience-based career education program to friends" were analyzed by comparison with ratings from control groups. The results yielded a significant difference with EBCE more favorable following the program than controls were EBCE $\bar{X}$ = 5.75, SD = .88, N = 8 while controls $\bar{X}$ = 4.45, SD 1.75, N = 11. Seventy-five percent of the EBCE students and 36% of the controls rated recommending at a "6" or a "7".

Criterion C. At least 50% of nonparticipating faculty support EBCE as a needed alternative program and would recommend the program.

Instrumentation. Mail Survey.

Results. The means and standard deviations (see Table 19) from 40% of the 15 randomly selected teachers who responded to the survey show neutral support for EBCE as a needed alternative program and for recommending it. The comments in Tables 20 and 21 also show this neutral support in a qualitative, subjective way.

Criterion D. At least 60% of the EBCE students' parents support the program as a needed alternative.

Instrumentation. Mail Survey.

Results. About 38% of the parents of the 48 G. 10-11 students were represented in the responses. The data in Table 19 and comments in Tables 20 and 21 show very strong support. However, not enough replies were received to met the criterion.

Conclusions. The objective was met in that strong support was found in Resource People, parents and students and neutral support from teachers.

STUDENT DEMOGRAPHIC DATA

The Collection Schedule on page 32 indicated the baseline data collected at project's beginning and beginning of each project year to describe EBCE and control students. These data were essentially used to describe the

student population in Program Objective 2 beginning on page 42 and including Tables 4 through 17. No differences other than sex and strength of preference for preferred occupational group were noted in career, academic, attitude, age and sex while parents' education and occupations were no different than controls', either.

The data thus support EBCE students as similar to control students in both the Grade 11 and 11 groups.

STUDENT OUTCOME OBJECTIVES

Summary tables of the post test comparisons of EBCE and control students are provided in Tables 22 and 23 while Table 24 provides in tabular form a comparison of outcome objectives over the 3 years of the project.

ACADEMIC SKILLS: Outcome Objective 1

EBCE students will maintain an acceptable level of performance in basic academic skills.

Instrumentation. EBCE and control students completed the Tests of Academic Progress (Form S) before the project began and the Test of Achievement and Proficiency (Form T) at project conclusion.

Results. Results are reported in Table 22 for Grade 10, Table 23 for Grade 11, and a comparison of attainment of objectives over the project's three years is shown in Table 24. Grade 10 students showed no significant differences on TAP Composition, Reading, and Mathematics between EBCE and control groups.

Grade 11 students' TAP scores yielded no differences betwen EBCE and control groups, indicating that skills were achieved at the same level. The standard scores EBCE mean compared with national middle-of-the-year norms places the average Reading score at the 52nd percentile rank and about the 47th on Mathematics.

Conclusions. The objective was met for Grade 10 and 11 students.

Table 22
Summary of Analysis of Covariance of
EBCE and Control Boys and Girls
Academic and Career Tests and Self Ratings

Grade 10

Test	F ratio			df
	Group	Sex	Group x sex	
Tests/Aca P.				
Comp.	.08	2.44	1.99	1,57
Rdng.	3.77	.12	2.10	1,57
Math.	.25	.14	.59	1,59
Career Dev.				
I. PT	.87	.00	6.96	1,59
II. Res.	.34	.22	6.84	1,58
III. Dec.-M	1.44	.72	.52	1,59
IV. Info.	1.13	1.66	.13	1,59
V. Work	4.22	.18	.82	1,58
VI. POG Kn	6.96	1.27	.07	1,50
Semantic Differential				
MY COMMUNITY	2.30	.70	.06	1,54
SCHOOL	.46	.06	2.06	1,52
MYSELF/COMM.	.34	.75	.02	1,49

* $P < .05$ Girls' means higher, EBCE means higher where significant

Table 23
Summary of t Tests for Post Test Scores
of EBCE and Control Boys and Girls on Career
and Academic Tests and Self Ratings

Grade 11

Test	EBCE X	EBCE SD	Control X	Control SD	t
Tests/Aca Progress					
Rdng.	187.4	27.3	184.4	22.7	-.25
Math.	179.9	21.1	174.2	25.4	-.53
Career Dev.					
I. Pl.	115.1	18.4	100.9	16.9	-1.72
II. Res.	306.5	34.1	261.5	49.9	-2.64*
III. Dec-M.	17.6	4.1	15.7	4.2	-.99
IV. Info.	21.3	4.7	20.5	7.2	-.29
V. Work	17.5	4.8	17.4	3.3	-.07
VI. POG Kn.	17.6	5.0	16.1	2.7	-.78
Seman. Diff.					
Comm.	42.4	9.2	40.1	6.7	-.38
School	35.0	10.0	36.2	8.8	.27
Myself in Comm.	31.7	8.6	39.0	8.2	1.77

*$p < .05$

TABLE 24

Comparison of Attainment of Student Outcome Objectives for Three Years

Question	Year	1978	1979		1980	
	Grade	10	10	11	10	11
1. Do students maintain an acceptable level of academic performance?		X	P	X	X	X
2. Do students work habits increase and ratings by Resource Persons yield positive results?		X	X	X	P	P
3. Do students increase positive attitudes toward work, planfulness, learning environment, self and community?		P	X	N	P	N
4. Do students increase career decision-making skills and exploration of nontraditional careers?		P	N	N	X	N
5. Do students increase in knowledge of and commitment to career development activities?		N	P	N	P	P
6. Do students career skills increase?		P	P	N	P	N

X = achieved
P = partly achieved
N = not achieved

[a]some differences in design and criteria occurred from year to year.

STUDENT WORK HABITS: Outcome Objective 2

EBCE students' work habits will be positively rated on sites, and attendance will be better than control students' and their own baseline rate.

Instrumentation. Comments from Resource Persons, Attendance records

Results. As shown in Table 20 and 21, the comments from resource persons indicate that students with dedication and commitment to the project perform fine and attendance (as well as task attention) are different from those whose attitudes are not involved.

Conclusions. Data on attendance was not available and no conclusion can be reached, although partial indications of appropriate work habits from some students were found in comments.

ATTITUDES: Outcome Objective 3

EBCE students will increase positive attitudes toward work, planfulness, learning environment, self, and community over those of control students.

Instrumentation. Career Development Inventory I: Extent of Planning; Semantic Differential School, Community, Myself Spending My Life in My Hometown Community; Student Information Questionnaire "Plans."

Results. EBCE girls and control boys in the Grade 10 groups showed significantly higher scores on attitudes toward Extent of Planning than the other students. No differences were found in attitudes toward school, community or staying in the hometown community, with pre-scores co-varied (see Table 22 and Table 28). As students indicated their plans (see Table 11) some shifts were shown as a greater percentage shifted into training and out of "other" (usually "travel"), along with other minor shifts.

Grade 11 (see Table 16) students' plans showed about the same rate of shift (slightly over half changed) from the pre-test as controls did, although cell sizes were too small to test. No significant differences

were found in attitudes toward planfulness, school, community or staying in hometown community, compared with controls (see Table 23).

Conclusions. Plans revealed a preference for further training in Grade 10 students while attitudes for attitudes in EBCE girls were much higher than other sex x group scores. The objective was partially met.

The objective was not met for Grade 11 students.

CAREER OBJECTIVES: Outcome Objective 4

EBCE students will increase career decision-making skills and nontraditional exploration over those of controls.

Instrumentation. Choices of Preferred Occupational Group from CDI answer sheet; Career Development Inventory III. Decision-making; V. World of work information, and VI. Knowledge of Preference Occupational Group.

Results. Grade 10 EBCE students' data of shifts in perferred Occupational Groups (see Table 7) show greatest differences in moves from Clerical and Sports/Entertainment choices and more to Education Human Welfare. On the CDI tests, two of the three tests (World of Work Information and Knowledge of Preferred Group) were significantly higher for EBCE students (see Tables 22 and 28).

Grade 11 students showed about the same shift (see Table 17) as seven changed in EBCE group and 6 in control in Preferred Occupational Groups. No differences were observed for CDI tests.

Conclusions. The shifts in Preferred Occupational Groups for EBCE students were perhaps due to the preponderance of female enrolees - the move to choices of more prestigious jobs in Education/Human Welfare from Clerical and Sports/Entertainment is not unusual as females strive to expand their aspirations. The objective was achieved for Grade 10

students as shown by results of two of the three CDI tests of career knowledge.

The objective was not achieved for Grade 11 Students.

CAREER DEVELOPMENT: Outcome Objective 5

EBCE students will increase knowledge of and commitment to career development activities.

Instrumentation. Career Development Inventory II. Knowledge and Use of Resources and IV. Career Information; survey questions of next step; Student Information Questionnaire "Plans"; strength of preference for Preferred Occupational Group from CDI answer sheet.

Results. EBCE students in Grade 10 showed changes in plans to more training after EBCE while strength of preference for Preferred Occupational Group (see Table 8) decreased from pre to post. Grade 10 students plans as mentioned above shifted to more specific training. Attitudes toward use of resources showed differences with EBCE girls' means highest while career information knowledge yielded no significant differences with controls (see Tables 22 and 28).

Grade 11 students' plans (see Table 6) showed some differences but strength of Preferred Occupational Group (see Table 13) was nonsignificant. However, Grade 11 students in EBCE did show significantly greater attitude toward use of resources following a semester of EBCE than controls' did.

Conclusions. Grade 10 and 11 studnets partly achieved this objective.

BREADTH OF CAREER OPTIONS: Outcome Objective 6 (summary)

EBCE students will increase career skills, which will permit more employment opportunities.

Instrumentation. Career Development Inventory (reprise of all tests); number of Activity Sheets completed; plans.

Results. Students in Grade 10 completed a substantial number of activities relating school lessons and sites. Significant differences on career and attitude measures were found and some evidence of nontraditional moves was found particularly for the girls.

Grade 11 students maintained growth in career objectives at about the same rate as controls did, except in the area of showing stronger attitudes toward knowledge of resources.

Conclusions. The objective was achieved for Grade 10 students and not achieved for Grade 11 students.

PROGRAM OBJECTIVES AND STUDENT OUTCOMES: DISCUSSION

The program objectives attempt to project the necessary conditions for student outcomes to be significant.

The first program objective was two-thirds met. The number of experience sites developed that involved employers in the community in providing exploratory activities for students representing half of the 114 worker trait groups, 2/3 of the USOE clusters, and all four of the major academic disciplines. These sites included a possible 60% described by professional, managerial and technical trades and a median of 2 sites for the 56 WTG available in 1980.

In practice, somewhat fewer of the professional, managerial and technical sites and other offices that close at the noon hour were feasible placement sites during the 1979-80 year. EBCE students in the first two years were enrolled for full-time the second semester. During the third year, the students were enrolled half-time all year for grade 10 students and for fall semester (half-time) for grade 11 students. Since the 1979-80 students depended upon the transportation that AVTS enrolled students used, about two-thirds of the students were in EBCE from 11:50 until 2:20. This time restriction upon possible placements had an unknown effect upon student outcomes.

Another constraint may be noted regarding the second program objective. No substantial differences were found between the control students and remainder of the population tested in fall, 1978, and the EBCE students in the same grade in 1979. The only demographic difference was that of sex, with more girls enrolling in EBCE (controls had more boys, the population was essentially half and half). All students, however, were from schools that have been more or less attending to career development in cooperation with State Fair Community College for several years. Therefore, the existence of

no substantial differences in the groups is important but makes generalizability of program objectives restricted to similar groups.

The third program objective, while describing credits received in an objective fashion, does not capture the rich diversity involved in promoting, the integration of academic, vocational, and general education. For example, one student was placed in a law enforcement site and in hospital social services, both of which provided an opportunity to coordinate academic work in Street Law with the placements. Another student on site of a disc jockey applied grammar (written and spoken) to the workworld. In career planning, students engage in values clarification, including "Who Am I" aptitude and interest value, learn to write resumes and present themselves in interviews, find out how to explore, relate to self, and make choices in the workworld.

For the second semester, academic emphases included: newspaper reading skills in current events; the day-to-day life of the confederate soldier in Civil War history; special science topics of astronomy, meteorology, geology, and oceanography; and research papers in English to develop library skills.

The fourth program objective results were interesting in that increasing relevance of education to society and employment might be considered to be reached merely because students volunteer to enroll in this very different alternative program: doing something new is risky and requires courage. Obviously the students were seeking answers to the factors creating dissatisfaction or curiosity about education and the adult world. However, specific, rigid answers do not exist, rather young adults must synthesize and evaluate information about themselves and their roles, make decisions and take action. The shifts in occupational groups being chosen seem to reflect new information and new relationships between self and work while high ratings of the project seem to indicate EBCE students did have their reasons for participation met. An easing of the strength of preference by EBCE students is commendable as

"choices" are preferable to "choice". (A pronounced swing toward firmer ratings by control students actually contributed the most to the nonsignificant post-project finding, however.) The students' comments bear out the increased confidence in their adult roles, as do their plans and the observations from Resource Persons and parents revealed through the sixth program objective.

The development of attitudes, skills and knowledge necessary to cope with accelerating societal change (Program Objective 5) were achieved through the numbers of planned academic activities utilizing the AEL Student Program Planning Guide and the inquiry methods at increasing levels of cognitive complexity in assorted placement sites. Thus does Experienced Based Career Education furnish the basis for more competent transition from the "front end loaded" years of public school education to the establishment of adult lifestyle.

The criteria for all the program objectives were generally met and furnish some descriptive indices to precisely what occurred that might affect student outcomes. For example the outcomes cited from the work by Joyce Cook on page 10 such as acquiring basic academic skills while enrolled in EBCE that are equal to those acquired in traditional academic programs were tested by using standardized achievement tests of reading, mathematics, and composition. The EBCE students had just completed an entirely new procedure that related their lessons to their "experiencing" the adult world, exploring occupations, and establishing some grasp of the boundaries of their own competencies and interests. That is, in addition to the typical academic growth achieved during this span of time, EBCE students obtained the goal in the context of different and more comprehensive goals. Cook's second, third, fifth, and seventh objectives that were related to attitudes spoke to the expectations that participants in the EBCE program would reflect less disenchantment with

education, its relevance and its pay-off. Thus work habits and attitudes toward work, as well as more information about oneself, would be expected to become more positive as relevance of one's training (education) in the adult world is established clearly. Some of the fear of the unknown also appeared reduced as students increased willingness to plan and deal with career development activities and at the same time increased amount of information about the world of work.

The willingness to develop career skills may have been the motivation force for enrolling in EBCE as well might the desire to escape the traditional environment. Nonetheless, the actual experience in increasing career skills was measured in multiple ways, to determine effects. As in previous years, some attitude changes (measured by the Career Development Inventory subscales I and II (see Tables 5, 6, 12, 22, 23, 24 and 28) and by the three Semantic Differential scales were found. Certain career skills were gauged by the degree to which decision-making skills (Cook's fourth outcome), try-out of nontraditional areas (Cook's eighth), levels of self knowledge (Cook's ninth and tenth), and world of work knowledge (Cook's eleventh outcome) would increase. The objective career tests show indications that these skills increased. In spite of a special AEL program for enhancing exploration in nontraditional areas, the enhancement seems to be revealed only for girls (a finding consistent with that of other studies). Yet as future plans are assessed, there is more sense of direction and of understanding what "future plans", "training", and "next step in career development" mean - as opposed to giving socially desirable, pat answers. This trend is by no means significant but may be fruitful in future research, especially in locations similar to this with several years of career education in the background where students may be parroting terminology but <u>behavior</u> shows change.

Cook's other objectives are less useful: students take no direct vocational training (objectives 12 and 13) and thus the actual progress from training to job was beyond this project. For the EBCE program to be the cause of students having a wider range and more employment opportunities in a larger geographic area was not well defined in criterion terms prior to program inception. Therefore it remains for further research to determine if students in an area with limits to employment (described in Tables 1-3) choose a wider range, if they do choose a wider range if it is related to more knowledge or more willingness to leave the community, if admitting nontraditional jobs into the range of choices is related, or merely if students become better able to express reasons for satisfaction with an initial choice (objective 7) with no broadening of range indicated. As mentioned above, allowing more choices into one's planning would depress one's strength of preference for one occupation or one cluster of occupations. Further, deciding to work full-time (Program Objective 5) may be a realistic financial base that is a prelude to further training.

Overall, the broad attainment of program objectives permitted multiple variables describing student outcomes to be tested.

The number of significant results exceeds chance, although the possibility must be mentioned that some historical situation occurred in this year's grade 10 and 11 classes that accounted for significant differences over the previous years' control gorup. The likelihood of this constraint is reduced since the previous year's experimental EBCE group only had one semester rather than a full year but showed somewhat the same program effects and also the national norm groups' means provided similar comparisons and conclusions.

The EBCE program provided a worthwhile alternative to the regular program based upon objective and subjective findings.

Budget Analysis and Evaluation

This section of the report contains an analysis and evaluation of the budget and expenditure data for the Experienced Based Career Education (EBCE) Project for Fiscal Year 1980 (June 1, 1979-May 31, 1980). This was the third and final year of a three year project. The federal grant was for $159,567. An additional $16,551 in carry-over funds was available to the project from the budget for the previous fiscal year (FY 1979). The carry-over funds were confirmed after the annual audit and approved by the Grant Agency. The total budget for the EBCE Project was $176,118. In addition, $12,348.17 accrued to the project from the participating local education agencies (LEA) as their share of student transportation costs. These fund were spent only for student transportation. The fiscal data relating to the EBCE budget are shown in Table 25.

Athough the Grant Agency requires only seven line items for fiscal reporting purposes, the EBCE Project used 25 individual line items to budget and account for the funds. The budget does not reflect line item transfers nor end of year accounting procedures necessary to clear or balance the accounts.

First quarter expenditures totaled $32,448.56 or 17.21 percent of the budget. Expenditures for the second quarter were $41,387.83 or 21.96 percent of the budget. Third quarter expenditures were $68,348.61 or 36.27 percent. Total expenditure for the first three quaarters represented 75.44 percent of the EBCE budget or $142,185. The balance remaining at the beginning of the fourth quarter was $46,281.17 or 24.56 percent of the total budget.

Any negative balance in a given line item was not so large that it could not be absorbed by transferring funds or by shifting the expenditure to other related line items. Internal transfers were made among several line items to accommodate changes in projected expenditure levels. These transfers did not represent any shift in priorities or program emphasis.

The expenditure pattern suggests that the budget will be expended as planned. In addition to other major expenses, the close-out of vacation days for employees and the costs associated with the project evaluation and production of the final report will be important factors during the fourth quarter.

In general, a review of the budget and expenditure data indicates that the project disbursed its funds at a relatively even rate throughout the final year. All funds were accounted for through line items that reflected the needs of the project. Transfers were made among various line items, but they did not reflect any change in program emphasis. Tables 26 and 27 contain budget and expenditure data for FY 1979 and FY 1978 respectively. It is noted that the budget and expenditure patterns show great consistency over the three year project.

TABLE 25

Experience Based Career Education Project

Budget and Expenditures

FY 1980

Line Item	Fiscal Year Budget (After Revision)	1st Quarter Expenditures August 31	2nd Quarter Expenditures November 30	3rd Quarter Expenditures February 29	4th Quarter Balance Remaining May 31
Salary, Professional	$ 17,580.85	$ 4,389.47	$ 4,389.51	$ 4,389.51	$ 4,420.36
Salary, Clerical	19,621.84	4,226.60	3,210.98	3,154.91	9,029.35
Salary, Placement	7,848.60	1,098.60	2,250.00	2,250.00	2,250.00
Salary, LC	49,562.48	5,606.48	14,420.40	15,843.90	13,691.70
Salary, PT	1,000.00	448.10	-0-	198.00	353.90
Professional Retirement	6,400.00	866.48	1,765.44	1,765.44	2,002.64
Nonprofessional Retirement	700.00	173.13	163.80	162.11	200.96
Health Insurance	2,367.00	509.22	537.78	588.78	671.22
Social Security	1,643.00	353.92	435.25	365.73	488.10
Travel	6,500.00	964.04	2,435.92	3,149.13	< 49.09 >
Equipment	500.00	246.28	353.00	-0-	< 99.28 >
Office Supplies	3,000.00	195.18	306.43	543.44	1,954.95
Contract Services	7,000.00	-0-	4,135.00	-0-	2,865.00
Student Transportation	15,289.23	7,528.97	3,338.00	10,256.43	6,514.00
Postage	1,300.00	261.14	269.14	408.03	361.69
Instructional Supplies	2,030.00	1,157.25	685.34	162.88	24.53
Reproduction	2,500.00	809.80	612.15	335.87	742.18
Recruitment	1,100.00	55.00	766.10	350.00	< 71.10 >
Professional Services	220.00	-0-	220.00	-0-	-0-
Contract Services	250.00	60.59	150.00	-0-	39.41
Telephone	2,500.00	571.36	545.84	492.45	890.35
Computer Services	2,500.00	2,500.00	-0-	-0-	-0-
Indirect Costs	23,932.00	-0-	-0-	23,932.00	-0-
Insurance	465.00	154.00	310.75	-0-	.25
Reports	300.00	272.95	27.00	-0-	.05
~~LER~~	123,948.17				
Total	$188,466.17	$ 32,448.56	$ 41,387.83	$ 68,348.61	$ 46,281.17
Percent	100.00%	17.21%	21.96%	36.27%	24.56%

Table 26
Experience Based Career Education Project
Budget and Expenditures
FY 1979

Line Item	Fiscal Year Budget June 1, 1978- May 31, 1979	1st Quarter Expenditures August 31	2nd Quarter Expenditures November 30	3rd Quarter Expenditures February 28	4th Quarter Balance Remaining
Salary, Administration	$16,800.00	$ 4,027.03	$ 4,026.99	$ 4,026.99	$ 4,718.99
Secretarial & Clerical	12,742.00	3,062.60	2,772.00	2,772.00	4,135.40
Placement	8,103.00	2,363.06	2,209.98	2,209.98	1,319.98
Training Coordinator	40,035.00	6,194.50	8,134.71	14,029.92	11,675.87
Salary, PT	-0-	-0-	26.50	54.90	(81.40)
Travel	10,300.00	3,798.02	1,833.95	4,148.73	519.30
Student Transportation	16,400.00	-0-	-0-	-0-	16,400.00
Postage	2,000.00	323.32	250.55	447.89	978.24
Office Supplies	3,850.00	1,494.42	1,622.38	2,153.70	(1,420.50)
Instructional Supplies	2,100.00	433.62	998.59	1,802.24	(1,134.45)
Reproduction	3,000.00	667.82	1,317.97	1,141.23	(127.02)
Recruitment	4,679.00	-0-	960.56	578.10	3,240.34
Professional Services	450.00	-0-	-0-	192.00	258.00
Contract Services	1,000.00	600.00	300.00	671.00	(571.00)
Contract Services Evaluation	17,000.00	2,500.00	4,408.96	146.04	9,945.00
Telephone	3,000.00	420.72	591.93	515.31	1,472.04
Computer	3,476.00	2,970.00	585.00	1,680.22	(1,759.22)
Indirect Costs	17,863.00	17,863.00	-0-	-0-	-0-
Retirement, Professional	5,399.00	920.37	1,155.38	1,715.43	1,707.82
Retirement, Nonprofessional	649.00	162.74	149.43	149.43	187.40
Workmen's Comp/ Medical Insurance	43.00	-0-	717.75	565.50	(1,240.25)
Social Security	1,227.00	354.09	301.41	307.44	264.06
Insurance	1,300.00	90.00	-0-	60.00	1,150.00
Final Reports	200.00	-0-	27.16	28.32	144.52
Equipment	1,900.00	341.80	1,912.63	201.32	(656.25)
Adjusting Entry		231.19	-0-	-0-	(231.19)
Total	$ 173,416.00	$ 48,709.30	$ 34,203.83	$ 39,598.19	$ 50,905.68
Percent	100.00	28.09	19.72	22.83	29.36

TABLE 27

Experience Based Career Education Project

Budget and Expenditures

FY 1978

Line Item	Fiscal Year Budget (After Revision)	1st Quarter Expenditures August 31	2nd Quarter Expenditures November 30	3rd Quarter Expenditures February 29	4th Quarter Balance Remaining May 31
Salary, Professional	$ 16,000.00	$ 3,784.21	$ 3,784.26	$ 3,784.26	$ 4,647.27
Salary, Clerical	10,680.00	3,234.00	3,276.00	3,276.00	894.00
Salary, Placement	12,000.00	1,974.00	2,148.00	2,904.00	4,974.00
Salary, LC	24,987.00	5,148.00	6,133.80	5,148.00	8,557.20
Salary, PT	13.00	-0-	-0-	342.02	< 329.02 >
Salary, Bus Driver	500.00	-0-	-0-	-0-	500.00
Travel	9,470.00	3,341.91	1,922.02	1,581.29	2,624.78
Student Transportation	12,000.00	-0-	-0-	-0-	12,000.00
Postage	2,000.00	191.43	104.34	124.47	1,579.76
Office Supplies	4,473.00	838.68	585.81	567.64	2,480.87
Instructional Supplies	2,602.00	367.61	1,727.88	2,116.19	<1,609.68 >
Reproduction	4,000.00	477.97	514.82	712.22	2,294.99
Professional Service	450.00	-0-	-0-	60.00	390.00
Consultants	1,000.00	-0-	-0-	120.00	880.00
Evaluation Consultant Services	23,576.00	-0-	1,737.00	8,215.34	13,623.66
Telephone	2,000.00	449.01	725.10	322.17	503.72
Computer Service	7,353.00	-0-	-0-	-0-	7,353.00
Indirect Costs	15,100.00	-0-	-0-	15,100.00	-0-
Retirement Professional	5,034.00	848.55	942.20	848.55	2,394.70
Retirement Nonprofessional	320.00	156.24	162.72	185.40	< 184.36 >
Workmans Compensation	144.00	-0-	-0-	144.00	-0-
Retirement Social Security	625.00	304.65	317.29	390.44	< 387.38 >
Insurance	810.00	-0-	-0-	147.80	662.20
Reproduction of Reports	200.00	-0-	-0-	-0-	200.00
Equipment	6,400.00	5,532.37	977.60	296.00	< 405.97 >
Total	$161,737.00	$26,648.63	$25,058.84	$46,385.79	$63,643.74
Percent	100.00%	16.48%	15.49%	28.68%	39.35%

APPENDIX A

Tables of Means of Post Measures

Table 28

Means of Significantly Different COANOVA

Test	Boys	Girls	Total
CDI I			
EBCE	94.4	103.6	
Control	100.4	90.7	
CDI II			
EBCE	247.2	280.0	
Control	268.8	246.0	
CDI V			
EBCE			14.9
Control			13.0
CDI VI			
EBCE			19.3
Control			16.5